

## CURRICULUM VITAE STEVEN J. LUCK

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### EDUCATIONAL AND PROFESSIONAL HISTORY

#### 1. Higher Education

Ph.D.	University of California, San Diego Neurosciences, 1993
M.S.	University of California, San Diego Neurosciences, 1989
B.A.	Reed College Psychology, 1986

#### 2. Professional and Academic Positions

2006-	Professor of Psychology	University of California, Davis
2002-2006	Professor of Psychology	University of Iowa
1998-2002	Associate Professor of Psychology	University of Iowa
1994-1998	Assistant Professor of Psychology	University of Iowa
1993-1994	Assistant Project Scientist	University of California, San Diego
1993	Visiting Scientist	Laboratory of Neuropsychology, NIMH/NIH
1990-1993	Graduate Research Fellow	University of California, San Diego
1989-1990	Visiting Asst. Professor of Psychology	Reed College
1986-1989	Graduate Research Fellow	University of California, San Diego
1983-1984	Research Assistant	Oregon Regional Primate Research Center

#### 3. Awards and Honors

James McKeen Cattell Sabbatical Award, 2004-2005  
 American Psychological Foundation F. J. McGuigan Young Investigator Prize, 2002  
 Troland Award in Experimental Psychology, National Academy of Sciences, 2001  
 Fellow of the American Psychological Association, Division 3, Experimental Psychology, 2001  
 Fellow of the American Psychological Association, Division 6, Behavioral Neuroscience and Comparative Psychology, 2005  
 APA Distinguished Scientific Award for Early Career Contribution to Psychology in the area of Behavioral and Cognitive Neuroscience, 1998/1999  
 McDonnell-Pew Cognitive Neuroscience Fellowship, UCSD, 1990-92  
 NSF Graduate Fellowship, UCSD, 1986-89  
 Phi Beta Kappa, Reed College, 1986

#### 4. Memberships

Fellow, American Psychological Association (Divisions 3 and 6)  
 Member, Psychonomic Society

Member, Society for Neuroscience  
 Member, Cognitive Neuroscience Society  
 Member, Vision Sciences Society  
 Member, International Association for the Study of Attention & Performance

## SCHOLARSHIP

### 1. Publications

#### *Books*

1. Luck, S. J. & Kappenman, E.S. (Eds.) (forthcoming in 2009). *Oxford Handbook of ERP Components*. New York: Oxford University Press.
2. Luck, S. J. & Hollingworth, A. (Eds.) (2008). *Visual Memory*. New York: Oxford University Press.
3. Luck, S. J. (2005). *An Introduction to the Event-Related Potential Technique*. Cambridge, MA: MIT Press.

#### *Journal Articles*

1. Hyun, J.-S., Woodman, G. F., Vogel, E. K., Hollingworth, A., & Luck, S. J. (in press). The comparison of visual working memory representations with perceptual inputs. *Journal of Experimental Psychology: Human Perception and Performance*.
2. Woodman, G. F., & Luck, S. J. (in press). Why is information displaced from visual working memory during visual search? *Visual Cognition*.
3. Hollingworth, A., & Luck, S. J. (2009). The role of visual working memory (VWM) in the control of gaze during visual search. *Attention, Perception, & Psychophysics*, *71*, 936-949.
4. Johnson, J. S., Spencer, J. P., Luck, S. J., & Schöner, G. (2009). A dynamic neural field model of visual working memory and change detection. *Psychological Science*, *20*, 568-577.
5. Nuechterlein, K. H., Luck, S. J., Lustig, C., & Sarter, M. (2009). CNTRICS final task selection: Control of attention. *Schizophrenia Bulletin*, *35*, 182-196.
6. Hollingworth, A., Richard, A. M., & Luck, S. J. (2008). Understanding the function of visual short-term memory: Transsaccadic memory, object correspondence, and gaze correction. *Journal of Experimental Psychology: General*, *137*, 163-181.
7. Johnson, J. S., Hollingworth, A., & Luck, S. J. (2008). The role of attention in the maintenance of feature bindings in visual short-term memory. *Journal of Experimental Psychology: Human Perception and Performance*, *34*, 41-55.
8. Lin, P.-H., & Luck, S. J. (2008). The influence of similarity on visual working memory representations. *Visual Cognition*, *17*, 356-372.
9. Luck, S. J., & Gold, J. M. (2008a). The construct of attention in schizophrenia. *Biological Psychiatry*, *64*, 34-39.
10. Luck, S. J., & Gold, J. M. (2008b). The translation of cognitive paradigms for patient research. *Schizophrenia Bulletin*, *34*, 629-644.
11. Oakes, L. M., Messenger, I. M., Ross-Sheehy, S., & Luck, S. J. (2008). New evidence for rapid development of color-location binding in infants' visual short-term memory. *Visual Cognition*.

12. Richard, A. M., Hollingworth, A., & Luck, S. J. (2008). Establishing object correspondence across eye movements: Flexible use of spatiotemporal and surface feature information. *Cognition*, *109*, 66-88.
13. Zhang, W., & Luck, S. J. (2008). Discrete fixed-resolution representations in visual working memory. *Nature*, *453*, 233-235.
14. Gold, J. M., Fuller, R. L., Robinson, B. M., Braun, E. L., & Luck, S. J. (2007). Impaired top-down control of visual search in schizophrenia. *Schizophrenia Research*, *94*, 148-155.
15. Hyun, J.-S., & Luck, S. J. (2007). Visual working memory as the substrate for mental rotation. *Psychonomic Bulletin & Review*, *13*, 154-158.
16. 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*, 834-839.
17. Matsukura, M., Luck, S. J., & Vecera, S. P. (2007). Attention effects during visual short-term memory maintenance: Protection or prioritization? *Perception & Psychophysics*, *69*, 1422-1434.
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.
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*, i118-i124.
20. Fuller, R. L., Luck, S. J., Braun, E. L., Robinson, B., McMahon, R. P., & Gold, J. M. (2006). Impaired control of visual attention in schizophrenia. *Journal of Abnormal Psychology*, *115*, 266-275.
21. Gold, J. M., Fuller, R. L., Robinson, B., McMahon, R. P., Braun, E. L., & Luck, S. J. (2006). Intact attentional control of working memory encoding in schizophrenia. *Journal of Abnormal Psychology*, *115*, 658-673.
22. Hopf, J.-M., Luck, S. J., Boelmans, K., Schoenfeld, M. A., Boehler, N., Rieger, J., et al. (2006a). The neural site of attention matches the spatial scale of perception. *Journal of Neuroscience*, *26*, 3532-3540.
23. Hopf, J.-M., Boehler, C. N., Luck, S. J., Tsotsos, J. K., Heinze, H. J., & Schoenfeld, M. A. (2006b). Direct neurophysiological evidence for spatial suppression surrounding the focus of attention in vision. *Proceedings of the National Academy of Sciences*, *103*, 1053-1058.
24. Luck, S. J., Fuller, R. L., Braun, E. L., Robinson, B., Summerfelt, A., & Gold, J. M. (2006). The speed of visual attention in schizophrenia: Electrophysiological and behavioral evidence. *Schizophrenia Research*, *85*, 174-195.
25. Oakes, L. M., Ross-Sheehy, S., & Luck, S. J. (2006). Rapid development of feature binding in visual short-term memory. *Psychological Science*, *17*, 781-787.
26. 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.
27. Fuller, R. L., Luck, S. J., McMahon, R. P., & Gold, J. M. (2005). Working memory consolidation is abnormally slow in schizophrenia. *Journal of Abnormal Psychology*, *114*, 279-290.
28. Vogel, E. K., Woodman, G. F., & Luck, S. J. (2005). Pushing around the locus of selection: Evidence for the flexible-selection hypothesis. *Journal of Cognitive Neuroscience*, *17*, 1907-1922.
29. Hopf, J.-M., Boelmans, K., Schoenfeld, A. M., Luck, S. J., & Heinze, H.-J. (2004). Attention to features precedes attention to locations in visual search: Evidence from electromagnetic brain responses in humans. *Journal of Neuroscience*, *24*, 1822-1832.

30. Luck, S. J. (2004). Understanding awareness: One step closer. *Nature Neuroscience*, 7, 208-209.
31. Woodman, G. F., & Luck, S. J. (2004). Visual search is slowed when visuospatial working memory is occupied. *Psychonomic Bulletin & Review*, 11, 269-274.
32. Gold, J. M., Wilk, C., McMahon, R., & Luck, S. J. (2003). Working memory for visual features and conjunctions in schizophrenia. *Journal of Abnormal Psychology*, 112, 61-71.
33. Ross-Sheehy, S., Oakes, L. M., & Luck, S. J. (2003). The development of visual short-term memory capacity in infants. *Child Development*, 74, 1807-1822.
34. Woodman, G. F., Vecera, S. P., & Luck, S. J. (2003). Perceptual organization influences visual working memory. *Psychonomic Bulletin & Review*, 10, 80-87.
35. Woodman, G. F., & Luck, S. J. (2003a). Serial deployment of attention during visual search. *Journal of Experimental Psychology: Human Perception and Performance*, 29, 121-138.
36. Woodman, G. F., & Luck, S. J. (2003b). Dissociations among attention, perception, and awareness during object-substitution masking. *Psychological Science*, 14, 605-111.
37. 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.
38. Hopf, J.-M., Boelmans, K., Schoenfeld, A. M., Heinze, H.-J., & Luck, S. J. (2002). How does attention attenuate target-distractor interference in vision? Evidence from magnetoencephalographic recordings. *Cognitive Brain Research*, 15, 17-29.
39. Schmidt, B. K., Vogel, E. K., Woodman, G. F., & Luck, S. J. (2002). Voluntary and involuntary attentional control of visual working memory. *Perception & Psychophysics*, 64, 754-763.
40. Vogel, E. K., & Luck, S. J. (2002). Delayed working memory consolidation during the attentional blink. *Psychonomic Bulletin & Review*, 9, 739-743.
41. 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.
42. 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.
43. Hopf, J.-M., Luck, S. J., Girelli, M., Hagner, T., Mangun, G. R., Scheich, H., et al. (2000). Neural sources of focused attention in visual search. *Cerebral Cortex*, 10, 1233-1241.
44. Luck, S. J., Woodman, G. F., & Vogel, E. K. (2000). Event-related potential studies of attention. *Trends in Cognitive Sciences*, 4, 432-440.
45. Vogel, E. K., & Luck, S. J. (2000). The visual N1 component as an index of a discrimination process. *Psychophysiology*, 37, 190-123.
46. Luck, S. J., & Thomas, S. J. (1999). What variety of attention is automatically captured by peripheral cues? *Perception & Psychophysics*, 61(7), 1424-1435.
47. Luck, S. J. (1999). Direct and indirect integration of event-related potentials, functional magnetic resonance images, and single-unit recordings. *Human Brain Mapping*, 8, 15-120.
48. Woodman, G. F., & Luck, S. J. (1999). Electrophysiological measurement of rapid shifts of attention during visual search. *Nature*, 400, 867-869.
49. Anllo-Vento, L., Luck, S. J., & Hillyard, S. A. (1998). Spatio-temporal dynamics of attention to color: Evidence from human electrophysiology. *Human Brain Mapping*, 6, 216-238.

50. Hillyard, S. A., Vogel, E. K., & Luck, S. J. (1998). Sensory gain control (amplification) as a mechanism of selective attention: Electrophysiological and neuroimaging evidence. *Philosophical Transactions of the Royal Society: Biological Sciences*, *353*, 1257-1270.
51. Luck, S. J., & Ford, M. A. (1998). On the role of selective attention in visual perception. *Proceedings of the National Academy of Sciences, U.S.A.*, *95*, 825-830.
52. Luck, S. J. (1998). Sources of dual-task interference: Evidence from human electrophysiology. *Psychological Science*, *9*, 223-227.
53. Luck, S. J., & Vogel, E. K. (1998). Response from Luck and Vogel (Response to Commentary by Nelson Cowan). *Trends in Cognitive Sciences*, *2*, 78-80.
54. Vogel, E. K., Luck, S. J., & Shapiro, K. L. (1998). Electrophysiological evidence for a postperceptual locus of suppression during the attentional blink. *Journal of Experimental Psychology: Human Perception and Performance*, *24*, 1656-1674.
55. Girelli, M., & Luck, S. J. (1997). Are the same attentional mechanisms used to detect visual search targets defined by color, orientation, and motion? *Journal of Cognitive Neuroscience*, *9*, 238-253.
56. Luck, S. J., Chelazzi, L., Hillyard, S. A., & Desimone, R. (1997). Neural mechanisms of spatial selective attention in areas V1, V2, and V4 of macaque visual cortex. *Journal of Neurophysiology*, *77*, 24-42.
57. Luck, S. J., Girelli, M., McDermott, M. T., & Ford, M. A. (1997). Bridging the gap between monkey neurophysiology and human perception: An ambiguity resolution theory of visual selective attention. *Cognitive Psychology*, *33*, 64-87.
58. Luck, S. J., & Vogel, E. K. (1997). The capacity of visual working memory for features and conjunctions. *Nature*, *390*, 279-281.
59. Luck, S. J., Hillyard, S. A., Mouloua, M., & Hawkins, H. L. (1996). Mechanisms of visual-spatial attention: Resource allocation or uncertainty reduction? *Journal of Experimental Psychology: Human Perception and Performance*, *22*, 725-737.
60. Luck, S. J., Vogel, E. K., & Shapiro, K. L. (1996). Word meanings can be accessed but not reported during the attentional blink. *Nature*, *382*, 616-618.
61. Moore, C. M., Egeth, H., Berglan, L. R., & Luck, S. J. (1996). Are attentional dwell times inconsistent with serial visual search? *Psychonomic Bulletin & Review*, *3*, 360-365.
62. Luck, S. J., & Hillyard, S. A. (1995). The role of attention in feature detection and conjunction discrimination: An electrophysiological analysis. *International Journal of Neuroscience*, *80*, 281-297.
63. Luck, S. J. (1995). Multiple mechanisms of visual-spatial attention: Recent evidence from human electrophysiology. *Behavioural Brain Research*, *71*, 113-123.
64. Gomez Gonzales, C. M., Clark, V. P., Fan, S., Luck, S. J., & Hillyard, S. A. (1994). Sources of attention-sensitive visual event-related potentials. *Brain Topography*, *7*, 41-51.
65. Heinze, H. J., Luck, S. J., Münte, T. F., Gös, A., Mangun, G. R., & Hillyard, S. A. (1994). Attention to adjacent and separate positions in space: An electrophysiological analysis. *Perception & Psychophysics*, *56*, 42-52.
66. Luck, S. J., & Hillyard, S. A. (1994a). Electrophysiological correlates of feature analysis during visual search. *Psychophysiology*, *31*, 291-308.
67. Luck, S. J. (1994). Cognitive and neural mechanisms of visual search. *Current Opinion in Neurobiology*, *4*, 183-188.

68. Luck, S. J., Hillyard, S. A., Mouloua, M., Woldorff, M. G., Clark, V. P., & Hawkins, H. L. (1994a). Effects of spatial cuing on luminance detectability: Psychophysical and electrophysiological evidence for early selection. *Journal of Experimental Psychology: Human Perception and Performance*, *20*, 887-904.
69. Luck, S. J., & Hillyard, S. A. (1994b). Spatial filtering during visual search: Evidence from human electrophysiology. *Journal of Experimental Psychology: Human Perception and Performance*, *20*, 1000-1014.
70. Luck, S. J., Hillyard, S. A., Mangun, G. R., & Gazzaniga, M. S. (1994b). Independent attentional scanning in the separated hemispheres of split-brain patients. *Journal of Cognitive Neuroscience*, *6*, 84-91.
71. Mangun, G. R., Luck, S. J., Plager, R., Loftus, W., Hillyard, S. A., Handy, T., et al. (1994). Monitoring the visual world: Hemispheric asymmetries and subcortical processes in attention. *Journal of Cognitive Neuroscience*, *6*, 267-275.
72. Pashler, H., Luck, S. J., Hillyard, S. A., Mangun, G. R., O'Brien, S., & Gazzaniga, M. S. (1994). Sequential operation of disconnected cerebral hemispheres in split-brain patients. *NeuroReport*, *5*, 2381-2384.
73. Luck, S. J., Fan, S., & Hillyard, S. A. (1993). Attention-related modulation of sensory-evoked brain activity in a visual search task. *Journal of Cognitive Neuroscience*, *5*, 188-195.
74. Hawkins, H. L., Hillyard, S. A., Luck, S. J., Mouloua, M., Downing, C. J., & Woodward, D. P. (1990). Visual attention modulates signal detectability. *Journal of Experimental Psychology: Human Perception and Performance*, *16*, 802-811.
75. Heinze, H. J., Luck, S. J., Mangun, G. R., & Hillyard, S. A. (1990). Visual event-related potentials index focused attention within bilateral stimulus arrays. I. Evidence for early selection. *Electroencephalography and Clinical Neurophysiology*, *75*, 511-527.
76. Luck, S. J., Heinze, H. J., Mangun, G. R., & Hillyard, S. A. (1990). Visual event-related potentials index focused attention within bilateral stimulus arrays. II. Functional dissociation of P1 and N1 components. *Electroencephalography and Clinical Neurophysiology*, *75*, 528-542.
77. Luck, S. J., & Hillyard, S. A. (1990). Electrophysiological evidence for parallel and serial processing during visual search. *Perception & Psychophysics*, *48*, 603-617.
78. Luck, S. J., Hillyard, S. A., Mangun, G. R., & Gazzaniga, M. S. (1989). Independent hemispheric attentional systems mediate visual search in split-brain patients. *Nature*, *342*, 543-545.
79. Luck, S. J., Colgrove, M., & Neuringer, A. (1988). Response sequence learning as a function of primary versus conditioned reinforcement. *Animal Learning and Behavior*, *16*, 8-14.
80. Neuringer, M., Connor, W. E., Lin, D. S., Barstad, L., & Luck, S. J. (1986). Biochemical and functional effects of prenatal and postnatal omega-3 fatty acid deficiency on retina and brain in rhesus monkeys. *Proceedings of the National Academy of Sciences, USA*, *83*, 4021-4025.

*Book Chapters, Commentaries, Etc.*

1. Luck, S. J. (2009). The spatiotemporal dynamics of visual-spatial attention. In F. Aboitiz & D. Cosmelli (Eds.), *From Attention to Goal-Directed Behavior: Neurodynamical, Methodological, and Clinical Trends* (pp. 51-66). Berlin: Springer.
2. Hollingworth, A., & Luck, S. J. (2008). Visual memory systems. In S. J. Luck & A. Hollingworth (Eds.), *Visual Memory* (pp. 3-8). New York: Oxford University Press.
3. Luck, S. J. (2008). Visual short-term memory. In S. J. Luck & A. Hollingworth (Eds.), *Visual Memory* (pp. 43-85). New York: Oxford University Press.

4. Luck, S. J. (2007). Visual Short Term Memory [Electronic Version]. Scholarpedia, 14709 from [http://www.scholarpedia.org/article/Visual\\_Short\\_Term\\_Memory](http://www.scholarpedia.org/article/Visual_Short_Term_Memory).
5. Oakes, L. M., Ross-Sheehy, S., & Luck, S. J. (2007). The development of visual short-term memory in infancy. In L. M. Oakes & P. J. Bauer (Eds.), *Short- and Long-Term Memory in Infancy and Early Childhood: Taking the First Steps Toward Remembering* (pp. 75-102). New York: Oxford University Press.
6. Luck, S. J. (2005a). Ten simple rules for designing ERP experiments. In T. C. Handy (Ed.), *Event-Related Potentials: A Methods Handbook* (pp. 17-32). Cambridge, MA: MIT Press.
7. Luck, S. J. (2005b). The operation of attention—millisecond by millisecond—over the first half second. In H. Ogmen & B. G. Breitmeyer (Eds.), *The First Half Second: The Microgenesis and Temporal Dynamics of Unconscious and Conscious Visual Processes*. Cambridge, MA: MIT Press.
8. Hopfinger, J. B., Luck, S. J., & Hillyard, S. A. (2004). Selective attention: Electrophysiological and neuromagnetic studies. In M. S. Gazzaniga (Ed.), *The Cognitive Neurosciences, Volume 3* (pp. 561-574). Cambridge, MA: MIT Press.
9. Luck, S. J., & Vecera, S. P. (2002). Attention. In S. Yantis (Ed.), *Stevens' Handbook of Experimental Psychology: Vol. 1: Sensation and Perception* (3rd ed.). New York: Wiley.
10. Vecera, S. P., & Luck, S. J. (2002). Attention. In V. S. Ramachandran (Ed.), *Encyclopedia of the Human Brain* (pp. 269-284). San Diego: Academic Press.
11. Luck, S. J., & Vogel, E. K. (2001). Multiple sources of interference in dual-task performance: The cases of the attentional blink and the psychological refractory period. In K. L. Shapiro (Ed.), *The Limits of Attention* (pp. 124-140). London: Oxford University Press.
12. Luck, S. J., & Hillyard, S. A. (2000). The operation of selective attention at multiple stages of processing: Evidence from human and monkey electrophysiology. In M. S. Gazzaniga (Ed.), *The New Cognitive Neurosciences*. Cambridge, MA: MIT Press.
13. Shapiro, K. L., & Luck, S. J. (1999). The attentional blink: A front-end mechanism for fleeting memories. In V. Coltheart (Ed.), *Fleeting Memories: Cognition of Brief Visual Stimuli* (pp. 95-118). Cambridge, MA: MIT Press.
14. Aston-Jones, G. S., Desimone, R., Driver, J., Luck, S. J., & Posner, M. I. (1998). Attention. In M. J. Zigmond, F. E. Bloom, S. C. Landis, J. L. Roberts & L. R. Squire (Eds.), *Fundamental Neuroscience* (pp. 1385-1409). San Diego: Academic Press.
15. Luck, S. J., & Girelli, M. (1998). Electrophysiological approaches to the study of selective attention in the human brain. In R. Parasuraman (Ed.), *The Attentive Brain* (pp. 71-94). Cambridge, MA: MIT Press.
16. Luck, S. J. (1998). Neurophysiology of selective attention. In H. Pashler (Ed.), *Attention* (pp. 257-295). East Sussex: Psychology Press.
17. Luck, S. J., & Beach, N. J. (1998). Visual attention and the binding problem: A neurophysiological perspective. In R. D. Wright (Ed.), *Visual Attention* (pp. 455-478). New York: Oxford University Press.
18. Hillyard, S. A., Anllo-Vento, L., Clark, V. P., Heinze, H. J., Luck, S. J., & Mangun, G. R. (1996). Neuroimaging approaches to the study of visual attention: A tutorial. In A. F. Kramer, M. G. H. Coles & G. D. Logan (Eds.), *Converging Operations in the Study of Visual Selective Attention* (pp. 107-138). Washington, D.C.: American Psychological Association.
19. Hillyard, S. A., Mangun, G. R., Woldorff, M. G., & Luck, S. J. (1995). Neural systems mediating selective attention. In M. S. Gazzaniga (Ed.), *The Cognitive Neurosciences* (pp. 665-681). Cambridge, MA: MIT Press.

20. Hillyard, S. A., Luck, S. J., & Mangun, G. R. (1994). The cuing of attention to visual field locations: Analysis with ERP recordings. In H. J. Heinze, T. F. Munte & G. R. Mangun (Eds.), *Cognitive Electrophysiology: Event-Related Brain Potentials in Basic and Clinical Research* (pp. 1-25). Boston: Birkhausen.
21. Mangun, G. R., Hillyard, S. A., & Luck, S. J. (1993). Electro cortical substrates of visual selective attention. In D. Meyer & S. Kornblum (Eds.), *Attention and Performance XIV* (pp. 219-243). Cambridge, Massachusetts: MIT Press.
22. Hillyard, S. A., Mangun, G. R., Luck, S. J., & Heinze, H. J. (1990). Electrophysiology of visual attention. In E. R. John, T. Harmony, L. Prichep, M. Valdez & P. Valdez (Eds.), *Machinery of the Mind* (pp. 186-205). Boston: Birkhausen.

## 2. Published Reviews of or Commentaries on Scholarship

1. Cowan, N. (1998). Visual and auditory working memory capacity: Commentary. *Trends in Cognitive Science*, 2, 77-78. (Commentary on Luck, & Vogel, 1997, *Nature*, 390, 279-281).
2. Wolfe, J. M. (1999). How do you pay attention? *Nature*, 400, 813. (Commentary on Woodman & Luck, 1999, *Nature*, 400, 867-869).
3. Hagoort, P. (2006). Event-related potentials from the user's perspective. *Nature Neuroscience*, 9, 463. (Review of Luck, 2005, *An Introduction the Event-Related Potential Technique*).
4. Slobounov, S. (2006). *The Quarterly Review of Biology*, 81, 201-202. (Review of Luck, 2005, *An Introduction the Event-Related Potential Technique*).

## 3. Grants

### *Current External Research Support*

#### Visual Working Memory: Representation and Process

R01 Award, NIMH

Principal Investigator, Steven J. Luck

Grant period: January 1, 2006 through December 31, 2010

Direct costs: \$787,500 over a 5-year period

Indirect costs: \$374,062 over a 5-year period

#### Yearly Workshop in the Event-Related Potential Technique

R25 Award, NIMH

Principal Investigator, Steven J. Luck

Grant period: July 1, 2007 through March 31, 2012

Direct costs: \$533,184 over a 5-year period

Indirect costs: \$42,655 over a 5-year period

#### Cognitive Neuroscience of Attention and Working Memory in Schizophrenia (years 6-10)

R01 Award, NIMH

Principal Investigators, James M. Gold and Steven J. Luck

Grant period: July 3, 2008 through March 31, 2013

Total costs (entire project): \$3,491,491,403 over a 5-year period

Direct costs (UCD portion): \$505,009 over a 5-year period

Indirect costs (UCD portion): \$243,804 over a 5-year period

The Development of Visual Short-Term Memory in Infancy

R01 Award, NICHD

Principal Investigator, Lisa M. Oakes (Co-PI, Steven J. Luck)

Grant period: April 1, 2005 through January 31, 2010

Direct costs: \$560,000 over a 5-year period

Indirect costs: \$266,000 over a 5-year period

ERP and fMRI Studies of Visual Attention

R01 Award, NIMH

Principal Investigator, G. R. Mangun (Steven J. Luck, investigator)

Grant period: June 1, 2008 through May 31, 2012

Direct costs: \$855,000 over a 4-year period

Indirect costs: \$423,838 over a 4-year period

Cognitive Control in Schizophrenia

R24 Translational Research Center in Behavioral Sciences, NIMH

Principal Investigator, Cameron Carter (Steven J. Luck, investigator)

Grant period: 8/25/08–4/30/11

Direct costs: \$ 901,432 over a 3-year period

Indirect costs: \$468,744 over a 3-year period

Cognitive Neuroscience Task Reliability & Clinical Applications Consortium

R01 Award, NIMH

Principal Investigator, Cameron Carter (Steven J. Luck, investigator)

Grant period: 9/30/08–5/31/11

Direct costs: \$382,131 over a 3-year period

Indirect costs: \$198,709 over a 3-year period

Eye Movements, Gaze Correction, and Visual Short-Term Memory

R01 Award, NEI

Principal Investigator, Andrew Hollingworth, Univ of Iowa (Co-PI, Steven J. Luck)

Grant period: October 1, 2006 through September 30, 2011

Direct costs: \$847,500 over a 5-year period

Indirect costs: \$402,562 over a 5-year period

From Where to What: The Dynamics of Spatial Cognition

Research Grant, NSF

Principal Investigator, John P. Spencer, Univ of Iowa (Co-PI, Steven J. Luck)

Grant period: January 1, 2006 through November 30, 2008

Direct costs: \$421,279 over a 3-year period

Indirect costs: \$194,227 over a 3-year period

*Previous External Research Support*

Cognitive Neuroscience of Attention in Schizophrenia (years 1-5)

R01 Award, NIMH

Principal Investigator, James M. Gold, Maryland Psychiatric Research Center

Subcontract to Steven J. Luck, University of Iowa

Grant period: September 27, 2001 through August 31, 2006

Total costs (entire project): \$1,793,155 over a 5-year period

Direct costs (UI subcontract): \$367,160 over a 5-year period

Indirect costs (UI subcontract): \$172,565 over a 5-year period

#### Attentional Mechanisms in Perception and Working Memory

R01 Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: April 1, 2001 through April 30, 2007  
 Direct costs: \$800,000 over a 5-year period  
 Indirect costs: \$376,000 over a 5-year period

#### Cognitive and Neural Mechanisms of Figure-Ground Segregation

Research grant from National Science Foundation  
 Principal Investigator, Shaun P. Vecera (Co-PI, Steven J. Luck)  
 Grant period: July 15, 2000 through June 30, 2003  
 Direct costs: \$123,807 over a 3-year period  
 Indirect costs: \$58,189 over a 3-year period

#### Stages and Mechanisms of Selective Attention

Research grant from National Science Foundation  
 Principal Investigator, Steven J. Luck  
 Grant period: August 15, 1998 through August 14, 2001  
 Direct costs: \$94,048 over a 3-year period  
 Indirect costs: \$42,322 over a 3-year period

#### Cognitive and Neural Mechanisms of Attention

R29 FIRST Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: April 1, 1997 through March 31, 2001  
 Direct costs: \$345,470 over a 5-year period  
 Indirect costs: \$152,941 over a 5-year period

#### Converging Approaches to the Study of Selective Attention

Multiple-investigator research grant from the Human Frontier Science Program  
 Principal applicant: G.R. Mangun, UC-Davis  
 Grant period: July 1st, 1997 through June 31, 2000  
 Direct costs: \$110,185 over a 3-year period

#### Neural Systems Mediating Attentional Selection in Time

Research grant funded by the McDonnell-Pew Program in Cognitive Neuroscience  
 Co-investigator: Dr. Kimron L. Shapiro, University of Wales  
 Grant period: July 1, 1995 through June 30, 1997  
 Direct costs: \$63,900 over a 2-year period

## 4. Professional Presentations

### *Workshops*

Mini ERP Boot Camp. Two-day workshop on ERP methods given at the University of Wisconsin, Madison (August, 2008).

Mini ERP Boot Camp. Two-day workshop on ERP methods given as a preconference symposium at the Annual Meeting of the Society for Psychophysiological Research (September, 2008).

Mini ERP Boot Camp. Two-day workshop on ERP methods at University of Maryland Center for Advanced Study of Language (September, 2008).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2008).

The Use of Event-Related Potentials to Study the Development and Decline of Cognitive Function. One-day workshop (with D. Mills) given as a preconference tutorial at the Annual Meeting of the Cognitive Science Society (July, 2008).

Mini ERP Boot Camp. Two-day workshop on ERP methods at Merck & Co. (February, 2008).

Mini ERP Boot Camp. Two-day workshop on ERP methods given as a preconference symposium at the Annual Meeting of the Society for Psychophysiological Research (October, 2007).

Mini ERP Boot Camp. Two-day workshop on ERP methods at SUNY Buffalo (September, 2007).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (August, 2007).

Mini ERP Boot Camp. Two -day workshop on ERP methods given as a preconference symposium at the Annual Meeting of the Society for Psychophysiological Research (October, 2006).

The University of Iowa ERP Boot Camp. Five-day workshop on ERP methods at the University of Iowa (July, 2003; July 2005).

### *Colloquia, Invited Addresses, and Symposia*

Visual Working Memory in Basic and Translational Science. M.I.N.D. Institute Research Seminar Series (June, 2009).

The Capacity and Resolution of Visual Working Memory. Invited presentation at VA Hospital in Martinez, CA (May, 2009).

A Vision-Memory-Vision Loop. Invited presentation at the annual meeting of the Cajal Club (September, 2008).

A Memory System You Use 172,800 Times Per Day Without Knowing You Have It. Invited presentation at Reed College Psychology Reunion (June, 2008).

Top-Down Control of Shifts of Attention. Invited address at the third CNTRICS meeting (Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia) (March, 2008).

The Representational Format of Visual Working Memory. Colloquium presentation at UC Santa Cruz (October, 2007).

The Challenges of Translating Cognitive Paradigms for use in Clinical Research. Invited address at the second CNTRICS meeting (Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia) (September, 2007).

Visual Working Memory: Representation, Process, and Function. Invited address at the 2007 APA Meeting (August, 2007).

Visual Working Memory: Representation, Process, and Function. Colloquium presentation at UC-Berkeley Vision Sciences Group (May, 2007).

Features and Objects in Visual Working Memory. Colloquium presentation at UC-Berkeley Psychology Department (April, 2007).

Attention. Invited address at the first CNTRICS meeting (Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia) (February, 2007).

Visual Working Memory: Representation, Process, and Function. Colloquium presentation at McMaster University (November, 2006).

Visual Working Memory: Representation, Process, and Function. Colloquium presentation at University of Wales (December, 2005).

Visual Short-Term Memory for Features and Objects. Invited symposium organized by S.J. Luck and A. Hollingworth for the Annual Meeting of the Psychonomic Society, Minneapolis, MN (November, 2004).

Visual Short-Term Memory for Features and Objects: A Synthesis of Recent Research. Paper presented in a symposium entitled Visual Short-Term Memory for Features and Objects at the Annual Meeting of the Psychonomic Society, Kansas City, MO (November, 2002).

Features and Objects in Visual Working Memory. Keynote address at the annual Object Perception, Attention, & Memory conference, Minneapolis, MN (November, 2004).

Features and Objects in Visual Working Memory. Colloquium presentation at Harvard University, Cambridge, MA (October, 2004).

Visual Attention and the Binding Problem. Colloquium presentation at Grinnell College, Grinnell, IA (October, 2004).

Toward an Embedded-Process Theory of Attention. Colloquium presentation at Johns Hopkins University, Baltimore, MD (February, 2004).

The Operation of Attention—Millisecond by Millisecond—Over the First Half Second. Invited presentation at NSF-funded symposium entitled The First Half Second, Houston, TX (November, 2003).

Mechanisms of Attention in Visual Search. Invited presentation at the McDonnell Summer Institute in Cognitive Neuroscience, Lake Tahoe, CA (July, 2003).

Serial and Parallel Processing in Visual Search. Colloquium presentation at the University of California, Davis, CA (June, 2003).

Toward an Embedded-Process Metatheory of Attention. Colloquium presentation at Vanderbilt University, Nashville, TN (May, 2003).

Electrophysiological evidence for serial shifts of attention in demanding visual search tasks. Paper presented in a symposium entitled New Perspectives on Visual Search at the Annual Meeting of the Psychonomic Society, Kansas City, MO (November, 2002).

New Perspectives on Visual Search. Invited symposium organized by S.J. Luck for the Annual Meeting of the Psychonomic Society, Kansas City, MO (November, 2002).

Attention as an Embedded Process. Colloquium presentation at the University of Pennsylvania, Philadelphia, PA (March, 2002).

The Role of Attention in Multiple Cognitive Subsystems: Behavioral and Electrophysiological Evidence. Colloquium presentation at the University of Delaware, Newark, DE (February, 2001).

The Role of Attention in Multiple Cognitive Subsystems: Behavioral and Electrophysiological Evidence. Colloquium presentation at the Maryland Psychiatric Research Center (August, 2000).

Attention and Information Overload. Invited address at the annual meeting of the American Psychological Society (June, 2000).

Attention and Cognitive Neuroscience. Invited address at the annual meeting of the American Psychological Association (August, 1999).

The Role of Attention in Multiple Cognitive Subsystems: Behavioral and Electrophysiological Evidence. Colloquium presentation at Indiana University, Bloomington, IN (June, 1999).

The Role of Attention in Multiple Cognitive Subsystems: Behavioral and Electrophysiological Evidence. Colloquium presentation at Yale University, New Haven, CT (March, 1999).

The Role of Attention in Multiple Cognitive Subsystems: Behavioral and Electrophysiological Evidence. Colloquium presentation at Washington University, St. Louis, MO (February, 1999).

The Role of Attention in Multiple Cognitive Subsystems: Behavioral and Electrophysiological Evidence. Colloquium presentation at the University of Missouri, Columbia, MO (February, 1999).

The Operation of Selective Attention at Multiple Stages of Processing: Evidence from Human and Monkey Electrophysiology. Invited presentation at the McDonnell Summer Institute in Cognitive Neuroscience, Lake Tahoe, CA (July, 1998).

Visual-Spatial Attention and the Binding Problem: Evidence from Human and Monkey Electrophysiology. Colloquium presentation, Department of Clinical Neurophysiology, Otto von Guericke University, Magdeburg, Germany (November, 1998).

ERPs, Functional Neuroimaging, and Single-Unit Recordings: Bridging the Gap Between Humans and monkeys. Symposium presentation at BrainMap 98, San Antonio, TX (December, 1998).

Visual Attention and the Resolution of Ambiguous Neural Coding. Colloquium presentation, Department of Psychology, University of Wales, Bangor, Wales (March, 1997).

Electrophysiological Studies of Visual Attention. Invited presentation, MRC Applied Psychology Unit, Cambridge, England (April, 1997).

On the Role of Selective Attention in Visual Perception. Symposium presentation at a National Academy of Sciences colloquium, "Neuroimaging of Human Brain Function," Irvine, CA (May, 1997).

Selective Attention from the Perspective of Cognitive Neuroscience. Invited presentation at the Annual Meeting of the Society for Philosophy and Psychology, San Francisco, CA (May, 1996).

Attention, Coarse Coding, and the Binding Problem: Evidence from Human and Monkey Electrophysiology. Invited presentation, Department of Psychology, University of California, Berkeley, CA (June, 1996).

Attention, Coarse Coding, and the Binding Problem: Evidence from ERPs and Single-Unit Recordings. Invited presentation, Center for Neuroscience, University of California, Davis, CA (June, 1996).

Electrophysiological Studies of Visual Attention in Humans and Monkeys. Symposium presentation at the Annual Meeting of the European Neurosciences Association, Strasbourg, France (September, 1996).

Neural Mechanisms of Visual-Spatial Attention: Bridging the Gap Between Monkeys and Humans. Colloquium presentation, Institute for Human Physiology, University of Verona, Italy (September, 1996).

Visual Attention and ERPs: Bridging the Gap Between Monkeys and Humans. Symposium presentation at the Annual Meeting of the Society for Psychophysiological Research, Vancouver, British Columbia (October, 1996).

The Role of Selective Attention in the Perception of Multiple-Element Stimulus Arrays. Invited presentation at the Banff Annual Seminar in Cognitive Science, Banff, Alberta, Canada (May, 1995).

Cognitive and Neural Functions of Visual Selective Attention. Colloquium presentation, Department of Psychology, Johns Hopkins University, Baltimore, MD (October, 1995).

Electrophysiological Evidence for Multiple Attentional Mechanisms in Spatial Cuing and Visual Search Tasks. Invited presentation at the Third West Coast Attention Meeting, Eugene, OR (May, 1993).

Mechanisms of Spatial Attention: Evidence from Human Electrophysiology. Invited presentation at the 25th Meeting of the European Brain and Behavior Society, Madrid, Spain (September, 1993).

Attentional Filtering and the N2pc Component. Symposium presentation at conference on New Developments in Event-Related Potentials, sponsored by the German EEG Society and Deutsche Forschungsgemeinschaft, Hannover, Germany (May, 1991).

## TEACHING

### 1. Undergraduate Courses (UC Davis)

2006-2007, Winter	PSC 100 Introduction to Cognitive Psychology
2006-2007, Spring	PSC 100 Introduction to Cognitive Psychology
2007-2008, Winter	PSC 100 Introduction to Cognitive Psychology
2007-2008, Spring	PSC 100 Introduction to Cognitive Psychology

### 2. Undergraduate Lab Supervision (UC Davis)

2006-2007	Lillian Tien, Candace Markley, Manuel Yeung, Usha Vyas
2007-2008	Lillian Tien, Candace Markley, Manuel Yeung, Nova Chavez, Elizabeth Takahashi, Chloe Brown
2008-2009	Candace Markley, Chloe Brown, Aurelia Darling, Alexis Norausky, Jessica Thomas, Sakib Vahora
2009-2010	Candace Markley, Aurelia Darling, Jessica Thomas, Sakib Vahora, Kristina Peterson

### 3. Graduate Student Supervision (UC Davis)

2006-present Emily Kappenman

### 3. Postdoctoral Fellow Supervision (UC Davis)

2008-present Carly Leonard  
 2009-present Risa Sawaki  
 2006-present Weiwei Zhang

### 4. Graduate Student Supervision (University of Iowa)

2003-2008	Adam Niese, Ph.D., currently junior specialist at UC Davis
2003-2005	Po-Han Lin, M.A., currently in the Taiwanese military
2002-2007	Jeffrey S. Johnson, Ph.D., currently postdoc at University of Wisconsin
2002-2007	Weiwei Zhang, Ph.D., currently postdoc at UC Davis
1999-2005	Joo-seok Hyun, Ph.D., currently asst professor at Chung-Ang Univ., Seoul, Korea
1997-2002	Geoffrey F. Woodman, Ph.D., currently assistant professor at Vanderbilt University
1995-2000	Edward K. Vogel, Ph.D., currently associate professor at University of Oregon
1998-2000	Brandon K. Schmidt, M.A., currently research associate at CDC
1997-1998	Aaron Eads, M.A.
1996-1998	Michelle A. Ford, M.A.
1995-1996	Steven J. Thomas., Ph.D., SAM Technologies
1994-1997	Massimo Girelli, Ph.D., currently associate professor at University of Verona, Italy

### 5. Graduate Orals Committees (UC Davis)

2007	Bong Walsh (Neuroscience)
2007	Paul Bulakowski
2007	Katherine Maclean
2007/2008	Jason Golubock
2008	Rick Addante (Neuroscience)
2008	Jason Haberman

## 5. Graduate Qualifying Examination Committees (UC Davis)

2007 Kevin Hill (Neuroscience)  
2009 Heather Shapiro (Neuroscience)

## 6. Graduate Individual Advising Committees (UC Davis)

2008- Luke Jenkins  
2008- Raechel Steckley  
2009- Wei-chun Wang

## SERVICE

### 1. Professional Service

#### *Current Committees and Positions*

Advisory Council, International Association for the Study of Attention & Performance  
Organizing Committee, EPIC XV (Fifteenth International Congress on Event-Related Potentials)

#### *Previous Committees and Positions*

Member, Search Committee for New Editor of *Cognitive, Affective, & Behavioral Neuroscience* (2006)  
Member, APA committee to select winner of Early Career Contribution Award (2000)  
Member, Search Committee for New Editor of *Psychobiology* (1999-2000)

#### *Current Editorial Positions*

Associate Editor of *Cognitive, Affective, & Behavioral Neuroscience* (2007-present)  
Associate Editor of *Psychonomic Bulletin & Review* (2006-present)  
Editorial Board of *Psychological Science* (2009-present)  
Editorial Board of *Perception & Psychophysics* (1998-present)

#### *Previous Editorial Positions*

Editorial Board of *Visual Cognition* (2005-2008)  
Editorial Board of *Journal of Experimental Psychology: General* (2005-2006)  
Editorial Board of *Journal of Experimental Psychology: Human Perception and Performance* (1999-2005)  
Editorial Board of *Psychological Science* (1999-2003)  
Editorial Board of *Psychological Bulletin* (1997-2002)  
Editorial Board of *Psychonomic Bulletin and Review* (1998-1999)

#### *Journal Reviewing*

Frequent ad hoc reviewer for many journals, including *Biological Psychiatry, Brain Research, Cognitive Psychology, Cortex, Human Brain Mapping, Journal of Cognitive Neuroscience, Journal of Neuroscience, Journal of Experimental Psychology, Nature, Nature Neuroscience, Neuron, Proceedings of the National Academy of Sciences, Psychophysiology, Science, Vision Research*

#### *Grant Reviewing*

Ad Hoc Member of NIH Cognition & Perception Study Section (2005)

Ad Hoc Member of NIH Special Emphasis Review Panel for Interdisciplinary Behavioral Science Centers (2001)

Ad Hoc Member of NIH IFCN-8 Study Section (2000)

Telephone reviewer for:

NIH Special Emphasis Review Panel for Building Translational Research in Integrative Behavioral Science (October, 2007)

NIH Integrative, Functional, & Cognitive Neuroscience (COG) Panel, Feb 2004

NIH Social Psychology, Personality and Interpersonal Processes Panel, March 2004, October 2004

NIH BBBP-D Special Emphasis Panel - Cognitive Development and Disorders, March 2004

NIMH Training Grant II (ZMH1-ERB-X 01) Panel, November 2004

NIH BBBP-4 (Cognition & Perception) Panel, March 2003

NIH ZRG1 SSS-V Panel, March 2003

NIH Special Emphasis Review Panel for Translational Research Centers in Behavioral Science (2002)

Ad Hoc Grant Reviewer for:

*Human Frontier Science Program* (2007)

*Vanderbilt University* (2001, 2004)

*The March of Dimes* (2001)

*National Institutes of Health* (2001)

*The Israel Science Foundation* (1997)

*National Science Foundation* (1995, 1996, 1997, 2001)

*National Science and Engineering Research Council* (Canada, 1996)

*The Wellcome Trust* (U.K., 1994)

#### *Conference Reviewing*

Conference submission reviewer, Vision Sciences Society (2006, 2007, 2008)

#### *Other Reviewing*

Reviewer for 3 chapters of a cognitive psychology textbook (Cognition by D. Reisberg) (2004)

#### *Promotion and/or Tenure Review Letters*

Duke University

George Mason University

Oregon State University

Princeton University

Rice University

Simon Fraser University

SUNY Stony Brook

SUNY Geneseo

Tufts University

University of British Columbia

University of California, Berkeley

University of California, San Diego

University of Illinois

University of Kansas

University of Toronto

University of New Mexico

University of Oregon

University of Illinois

University of Rochester

Washington University

*Other Professional Service*

External reviewer for Ph.D. thesis of Margaret C. Jackson at the University of Wales, Bangor, December 2005

Telephone interviewee for an NIMH contract project, "Measurement and Treatment Research to Improve Cognition in Schizophrenia" (2003)

**2. Community Service**

*Public Presentations*

Interview on *Insight*, KCJZ Sacramento, April 6, 2008

"Eye, Brain, & Mind." Presentation at Oaknoll Retirement Home, April 26, 2001

"Eye, Brain, & Mind." Talk show presentation on "Iowa Talks," WSUI, October 20, 2000

**3. Departmental and Graduate Group Service**

*Positions*

2009-2010 Interim Director, Center for Mind & Brain

2008-2010 Area Head, Perception, Cognition, & Cognitive Neuroscience (Psychology)

*Search Committees*

2007-2008 Cognitive Neuroscience Search Committee (Psychology/CMB)

*Other Committees*

2008-2009 Executive Committee (Psychology)

2008-2009 Graduate Admissions Committee (Psychology)

2008-2009 Educational Policy Committee (Neuroscience)

2007-2009 Undergraduate Curriculum Committee (Psychology)

2007-2008 Ad hoc committee to organize graduate recruiting visitation (Psychology)

2006-2007 Space Committee (Psychology)

**3. College/University Service**

2008-2009 Search Committee for Director of Center for Neuroscience

2008 Research presentation to Dean's Advisory Committee

2007-2009 Faculty Senate Representative (alternate)