

## CURRICULUM VITAE STEVEN J. LUCK

**Business Address:** UC-Davis Center for Mind & Brain, 267 Cousteau Pl, Davis, CA 95618

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### EDUCATIONAL AND PROFESSIONAL HISTORY

#### 1. Higher Education

Ph.D.	University of California, San Diego Neurosciences, 1993 Advisor: Steven A. Hillyard
M.S.	University of California, San Diego Neurosciences, 1989 Advisor: Steven A. Hillyard
B.A.	Reed College Psychology, 1986 Advisors: Dell L. Rhodes and Allen Neuringer

#### 2. Professional and Academic Positions

2016- 2013	Distinguished Professor of Psychology Professor in Cognitive Neuroscience	University of California, Davis University of Birmingham (UK)
2010- 2009-2010	Director, Center for Mind & Brain Interim Director, Center for Mind & Brain	University of California, Davis University of California, Davis
2006-2016	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 with R. Desimone	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

Elected Fellow of the American Association for the Advancement of Science, 2012  
 Elected Fellow of the Society of Experimental Psychologists, 2010  
 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  
 Elected Fellow of the American Psychological Association, Division 3, Experimental Psychology, 2001  
 Elected 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 Association for the Advancement of Science  
 Fellow, Society of Experimental Psychologists  
 Member, Association for Psychological Science  
 Fellow, 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

See Google Scholar listing at <https://scholar.google.com/citations?user=vITXmTgAAAAJ>

#### Books

1. Poeppel, D., Mangun, G.R., & Gazzaniga, M.S. (Eds.) (2019). *The Cognitive Neurosciences, 6<sup>th</sup> Edition* [S.J. Luck & S. Kastner, editors of Attention & Working Memory section]. Cambridge, MA: MIT Press.
2. Luck, S. J. (2014). *An Introduction to the Event-Related Potential Technique, Second Edition*. Cambridge, MA: MIT Press.
3. Luck, S. J. & Kappenman, E.S. (Eds.) (2012). *The Oxford Handbook of Event-Related Potential Components*. New York: Oxford University Press.
4. Luck, S. J. (2009). 事件相关电位基础 (*An Introduction to the Event-Related Potential Technique, Simplified Chinese Translation*). Shanghai: East China Normal University Press.
5. Gazzaniga, M.S. (Ed.) (2009). *The Cognitive Neurosciences, 4<sup>th</sup> Edition* [S.J. Luck & G.R. Mangun, editors of Attention section]. Cambridge, MA: MIT Press.
6. Luck, S. J. & Hollingworth, A. (Eds.) (2008). *Visual Memory*. New York: Oxford University Press.
7. Luck, S. J. (2005). *An Introduction to the Event-Related Potential Technique*. Cambridge, MA: MIT Press.

#### Journal Articles

1. Bacigalupo, F., & Luck, S. J. (in press). Lateralized suppression of alpha-band EEG activity as a mechanism of target processing. *The Journal of Neuroscience*.
2. Bae, G.-Y., & Luck, S. J. (in press). Reactivation of previous experiences in a working memory task. *Psychological Science*.
3. Bansal, S., Robinson, B. M., Leonard, C. J., Hahn, B., Luck, S. J., & Gold, J. M. (in press). Failures in top-down control in schizophrenia revealed by patterns of saccadic eye movements. *Journal of Abnormal Psychology*.
4. Cantrell, L. M., Kanjila, S., Harrison, M., Luck, S. J., & Oakes, L. M. (in press). Cues to individuation facilitate 6-month-old infants' visual short-term memory. *Developmental Psychobiology*.
5. Gold, J. M., Barch, D. M., Feuerstahler, L. M., Carter, C. S., MacDonald III, A. W., Ragland, J. D., Silverstein, S. M., Strauss, M. E., & Luck, S. J. (in press). Working memory capacity is reduced across psychotic disorders. *Schizophrenia Bulletin*.
6. Bae, G. Y., & Luck, S. J. (in press). What happens to an individual visual working memory representation when it is interrupted? *British Journal of Psychology*.
7. Feuerstahler, L. M., Luck, S. J., MacDonald III, A., & Waller, N. G. (in press). A note on the identification of change detection task models to measure storage capacity and attention in visual working memory. *Behavior Research Methods*.
8. Gaspelin, N., Gaspar, J. M., & Luck, S. J. (in press). Oculomotor Inhibition of Salient Distractors: Voluntary Inhibition Cannot Override Selection History. *Visual Cognition*.
9. Bae, G. Y., & Luck, S. J. (2019). Decoding motion direction using the topography of sustained ERPs and alpha oscillations. *NeuroImage*, 184, 242-255.
10. Gaspelin, N., & Luck, S. J. (2019). Inhibition as a Potential Resolution to the Attentional Capture Debate. *Current Opinion in Psychology*, 29, 12-18.

11. Bae, G. Y., & Luck, S. J. (2018). Dissociable Decoding of Working Memory and Spatial Attention from EEG Oscillations and Sustained Potentials. *The Journal of Neuroscience*, *38*, 409-422.
12. Bacigalupo, F., & Luck, S. J. (2018). Event-related potential components as measures of aversive conditioning in humans. *Psychophysiology*, *55*, e13015.
13. Bansal, S., Robinson, B. M., Geng, J. J., Leonard, C. J., Hahn, B., Luck, S. J., & Gold, J. M. (2018). The Impact of Reward on Attention in Schizophrenia. *Schizophrenia Research: Cognition*, *12*, 66-73.
14. Beck, V. M., Luck, S. J., & Hollingworth, A. (2018). Whatever you do, don't look at the... Evaluating guidance by an exclusionary attentional template. *Journal of Experimental Psychology: Human Perception and Performance*, *44*, 645-662.
15. Boudewyn, M. A., Luck, S. J., Farrens, J. L., & Kappenman, E. S. (2018). How Many Trials Does It Take to Get a Significant ERP Effect? It Depends. *Psychophysiology*, *55*, e13049.
16. Gaspelin, N., & Luck, S. J. (2018). Distinguishing Among Potential Mechanisms of Singleton Suppression. *Journal of Experimental Psychology: Human Perception and Performance*, *44*, 626-644.
17. Gaspelin, N., & Luck, S. J. (2018). The Role of Inhibition in Avoiding Distraction by Salient Stimuli. *Trends in Cognitive Sciences*, *22*, 79-92
18. Gaspelin, N., & Luck, S. J. (2018). Combined Electrophysiological and Behavioral Evidence for the Suppression of Salient Distractors. *Journal of Cognitive Neuroscience*, *30*, 1265-1280.
19. Gaspelin, N., & Luck, S. J. (2018). "Top-down" Does Not Mean "Voluntary". *Journal of Cognition*, *1*, 25. <http://doi.org/10.5334/joc.28>
20. Gold, J. M., Robinson, B. M., Leonard, C. J., Hahn, B., Chen, S., McMahon, R., & Luck, S. J. (2018). Selective attention, working memory, and executive function as potential independent sources of cognitive dysfunction in schizophrenia. *Schizophrenia Bulletin*, *44*, 1227-1234.
21. Hahn, B., Robinson, B. M., Leonard, C. J., Luck, S. J., & Gold, J. M. (2018). Posterior parietal cortex dysfunction is central to working memory storage and broad cognitive deficits in schizophrenia. *The Journal of Neuroscience*, *37*, 8378-8387.
22. Lee, J., Leonard, C. J., Luck, S. J., & Geng, J. J. (2018). Dynamics of feature-based attentional selection during color-shape conjunction search. *Journal of Cognitive Neuroscience*, *30*, 1773-1787.
23. Mitsven, S. G., Cantrell, L. M., Luck, S. J., & Oakes, L. M. (2018). Visual short-term memory guides infants' visual attention. *Cognition*, *2018*, *177*, 189-197.
24. Bae, G. Y., & Luck, S. J. (2017). Interactions between visual working memory representations. *Attention, Perception, & Psychophysics*, *8*, 2376-2395.
25. Erickson, M. A., Albrecht, M. A., Robinson, B. M., Luck, S. J., & Gold, J. M. (2017). Impaired suppression of delay-period alpha and beta is associated with impaired working memory in schizophrenia. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, *2*, 272-279. [See commentary at [http://www.biologicalpsychiatrycnri.org/article/S2451-9022\(17\)30037-X/fulltext](http://www.biologicalpsychiatrycnri.org/article/S2451-9022(17)30037-X/fulltext)]
26. Gaspelin, N., Leonard, C. J., & Luck, S. J. (2017). Suppression of Overt Attentional Capture by Salient-But-Irrelevant Color Singletons. *Attention, Perception, & Psychophysics*, *79*, 45-62.
27. Kreither, J., Lopez-Calderon, J., Leonard, C. J., Robinson, B. M., Ruffle, A., Hahn, B., Gold, J. M., & Luck, S. J. (2017). Electrophysiological Evidence for Spatial Hyperfocusing in Schizophrenia. *The Journal of Neuroscience*, *37*, 3813-3823.
28. Leonard, C. J., Robinson, B. M., Hahn, B., Luck, S. J., & Gold, J. M. (2017). Altered spatial profile of distraction in people with schizophrenia. *Journal of Abnormal Psychology*, *126*, 1077-1086.
29. Luck, S. J., & Gaspelin, N. (2017). How to Get Statistically Significant Effects in Any ERP Experiment (and Why You Shouldn't). *Psychophysiology*, *54*, 146-157.

30. Oakes, L. M., Baumgartner, H. A., Kanjlia, S., & Luck, S. J. (2017). An eye tracking investigation of color-location binding in infants' visual short-term memory. *Infancy, 22*, 584-607.
31. Sawaki, R., Kreither, J., Leonard, C. J., Kaiser, S. T., Hahn, B., Gold, J. M., & Luck, S. J. (2017). Hyperfocusing on goal-related information in schizophrenia: Evidence from electrophysiology. *Journal of Abnormal Psychology, 126*, 106-116.
32. Bengson, J. J., & Luck, S. J. (2016). Effects of strategy on visual working memory capacity. *Psychonomic Bulletin & Review, 23*, 265-270.
33. Kappenman, E. S., & Luck, S. J. (2016). Best Practices for Event-Related Potential Research in Clinical Populations. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 1*, 110-115.
34. Kappenman, E. S., Luck, S. J., Kring, A. M., Lesh, T. A., Mangun, G. R., Niendam, T., Ragland, J. D., Ranganath, C., Solomon, M., Swaab, T. Y., & Carter, C. S. (2016). Electrophysiological evidence for impaired control of motor output in schizophrenia. *Cerebral Cortex, 26*, 1891-1899.
35. Kwon, M.-K., Setoodhenia, M., Baek, J., Luck, S. J., & Oakes, L. M. (2016). The development of visual search in infancy: Attention to faces versus physical salience. *Developmental Psychology, 52*, 537-555.
36. Tanner, D., Norton, J. J., Morgan-Short, K., & Luck, S. J. (2016). On high-pass filter artifacts (they're real) and baseline correction (it's a good idea) in ERP/ERMF analysis. *Journal of Neuroscience Methods, 266*, 166-170.
37. Tas, A. C., Luck, S. J., & Hollingworth, A. (2016). The Relationship between Visual Attention and Visual Working Memory Encoding: A Dissociation between Covert and Overt Orienting. *Journal of Experimental Psychology: Human Perception and Performance, 42*, 1121-1138.
38. Bacigalupo, F., & Luck, S. J. (2015). The allocation of attention and working memory in visual crowding. *Journal of Cognitive Neuroscience, 27*, 1180-1193.
39. Erickson, M. A., Hahn, B., Leonard, C. J., Robinson, B. M., Gray, B., Luck, S. J., & Gold, J. M. (2015). Impaired working memory capacity is not caused by failures of selective attention in schizophrenia. *Schizophrenia Bulletin, 41*, 366-373.
40. Gaspelin, N., Leonard, C. J., & Luck, S. J. (2015). Direct Evidence for Active Suppression of Salient-but-Irrelevant Sensory Inputs. *Psychological Science, 26*, 1740-1750.
41. Leonard, C. J., Balestreri, A., & Luck, S. J. (2015). Interactions between space-based and feature-based attention. *Journal of Experimental Psychology: Human Perception and Performance, 41*, 11-16.
42. Lockhart, S. N., Luck, S. J., Geng, J. J., Beckett, L., Disbrow, E. A., Carmichael, O., & DeCarli, C. (2015). White matter hyperintensities among older adults are associated with futile increase in frontal activation and functional connectivity during spatial search. *PLoS One, 10*(3), e0122445.
43. Miller, C. E., Luck, S. J., & Shapiro, K. L. (2015). Electrophysiological measurement of the effect of inter-stimulus competition on early cortical stages of human vision. *NeuroImage, 105*, 229-237.
44. Ragland, J. D., Ranganath, C., Philips, J., Boudewyn, M. A., Kring, A. M., Lesh, T. A., Long, D. L., Luck, S. J., Niendam, T. A., Solomon, M., Swaab, T. Y., & Carter, C. S. (2015). Cognitive Control of Episodic Memory in Schizophrenia: Differential Role of Dorsolateral and Ventrolateral Prefrontal Cortex. *Frontiers in Human Neuroscience, 9*:604.
45. Sawaki, R., Luck, S. J., & Raymond, J. E. (2015). How attention changes in response to incentives. *Journal of Cognitive Neuroscience, 27*, 2229-2239. [Featured in a press release from the journal: [http://www.cogneurosociety.org/attention\\_sawaki\\_july15/](http://www.cogneurosociety.org/attention_sawaki_july15/)]
46. Tanner, D., Morgan-Short, K., & Luck, S. J. (2015). How inappropriate high-pass filters can produce artifactual effects and incorrect conclusions in ERP studies of language and cognition. *Psychophysiology, 52*, 997-1009.
47. Zhang, W., & Luck, S. J. (2015). Opposite Effects of Capacity Load and Resolution Load on Distractor Processing. *Journal of Experimental Psychology: Human Perception and Performance, 41*, 22-27.

48. Erickson, M. A., Hahn, B., Leonard, C. J., Robinson, B. M., Luck, S. J., & Gold, J. M. (2014). Enhanced vulnerability to distraction does not account for working memory capacity reduction in people with schizophrenia. *Schizophrenia Research: Cognition*, *1*, 149-154.
49. Gray, B. E., Hahn, B., Robinson, B. M., Harvey, A., Leonard, C. J., Luck, S. J., & Gold, J. M. (2014). Relationships between divided attention and working memory impairment in people with schizophrenia. *Schizophrenia Bulletin*, *40*, 1462-1471.
50. Kappenman, E. S., Farrens, J. L., Luck, S. J., & Hajcak Proudfit, G. (2014). Behavioral and ERP Measures of Attentional Bias to Threat in the Dot-Probe Task: Poor Reliability and Lack of Correlation with Anxiety. *Frontiers in Psychology*, *5*, 1368.
51. Keil, A., Debener, S., Gratton, G., Junhöfer, M., Kappenman, E. S., Luck, S. J., Luu, P., Miller, G., & Yee, C. M. (2014). Publication guidelines and recommendations for studies using electroencephalography and magnetoencephalography *Psychophysiology*, *51*, 1-21.
52. Kwon, M.-K., Oakes, L. M., & Luck, S. J. (2014). Visual short-term memory for complex objects in 6- and 8-month-old infants. *Child Development*, *85*, 564-577.
53. Leonard, C. J., Robinson, B. M., Hahn, B., Gold, J. M., & Luck, S. J. (2014). Enhanced distraction by magnocellular salience signals in schizophrenia. *Neuropsychologia*, *56*, 359-366.
54. Lockhart, S. N., Roach, A. E., Luck, S. J., Geng, J. J., Beckett, L., Carmichael, O., & DeCarli, C. (2014). White matter hyperintensities are associated with visual search behavior independent of generalized slowing in aging. *Neuropsychologia*, *52*, 93-101.
55. Lopez-Calderon, J., & Luck, S. J. (2014). ERPLAB: An open-source toolbox for the analysis of event-related potentials. *Frontiers in Human Neuroscience*, *8*(213), 1-14.
56. Luck, S.J., McClenon, C., Beck, V.M., Hollingworth, A., Leonard, C.J., Hahn, B., Robinson, B.M., & Gold, J.M. (2014). Hyperfocusing in schizophrenia: Evidence from interactions between working memory and eye movements. *Journal of Abnormal Psychology*, *123*, 783-795.
57. Hollingworth, A., Matsukura, M., & Luck, S. J. (2013a). Visual Working Memory Modulates Rapid Eye Movements to Simple Onset Targets. *Psychological Science*, *24*(5), 790-796.
58. Hollingworth, A., Matsukura, M., & Luck, S. J. (2013b). Visual Working Memory Modulates Low-level Saccade Target Selection: Evidence from Rapidly Generated Saccades in the Global Effect Paradigm. *Journal of Vision*, *13*:4, 1-18.
59. Johnson, M. K., McMahon, R. P., Robinson, B. M., Harvey, A. N., Hahn, B., Leonard, C. J., Luck, S. J., & Gold, J. M. (2013). The relationship between working memory capacity and broad measures of cognitive ability in healthy adults and people with schizophrenia. *Neuropsychology*, *27*, 220-229.
60. Leonard, C. J., Robinson, B. M., Kaiser, S. T., Hahn, B., McClenon, C., Harvey, A. N., Luck, S. J., & Gold, J. M. (2013). Testing sensory and cognitive explanations of the antisaccade deficit in schizophrenia. *Journal of Abnormal Psychology*, *122*, 1111-1120.
61. Leonard, C. J., Lopez-Calderon, J., Kreither, J., & Luck, S. J. (2013). Rapid feature-driven changes in the attentional window. *Journal of Cognitive Neuroscience*, *25*, 1100-1110.
62. Luck, S. J., & Vogel, E. K. (2013). Visual Working Memory Capacity: From Psychophysics and Neurobiology to Individual Differences. *Trends in Cognitive Sciences*, *17*, 391-400.
63. Oakes, L. M., Baumgartner, H. A., Barrett, F. S., Messenger, I. M., & Luck, S. J. (2013). Developmental changes in visual short-term memory in infancy: Evidence from eye-tracking. *Frontiers in Developmental Psychology*, *4*:697, 1-13.
64. Sawaki, R., & Luck, S. J. (2013). Active suppression after involuntary capture of attention. *Psychonomic Bulletin & Review*, *20*, 296-301.
65. Strauss, M. E., McLouth, C. J., Barch, D. M., Carter, C. S., Gold, J. M., Luck, S. J., MacDonald III, A. W., Ragland, J. D., Ranganath, C., Keane, B. P., & Silverstein, S. M. (2013). Temporal Stability and Moderating Effects of Age and Sex on CNTRaCS Task Performance. *Schizophrenia Bulletin*.
66. Swaab, T. Y., Boudewyn, M. A., Long, D. L., Luck, S. J., Kring, A., Ragland, J. D., Ranganath, C., Lesh, T., Niendam, T., Solomon, M. S., Mangun, G. R., & Carter, C. S.

- (2013). Spared and impaired spoken discourse processing in schizophrenia: Effects of local and global language context. *Journal of Neuroscience*, *33*, 15578–15587.
67. Barch, D. M., Carter, C. S., Dakin, S. C., Gold, J. M., Luck, S. J., MacDonald III, A., Ragland, J. D., Silverstein, S., & Strauss, M. E. (2012). The Clinical Translation of a Measure of Gain Control: the Contrast-Contrast Effect Task. *Schizophrenia Bulletin*, *38*, 135-143.
  68. Barch, D. M., Moore, H., Nee, D. E., Manoach, D. S., & Luck, S. J. (2012). CNTRICS imaging biomarkers selection: Working memory. *Schizophrenia Bulletin*, *38*(1), 43-52.
  69. Beck, V. M., Hollingworth, A., & Luck, S. J. (2012). Simultaneous Control of Attention by Multiple Working Memory Representations. *Psychological Science*, *23*, 887-898.
  70. Hahn, B., Hollingworth, A., Robinson, B. M., Kaiser, S. T., Leonard, C. J., Beck, V. M., Kappenman, E. S., Luck, S. J., & Gold, J. M. (2012). Control of working memory content in schizophrenia. *Schizophrenia Research*, *12*, 70-75.
  71. Hahn, B., Robinson, B. M., Kaiser, S. T., Matveeva, T. M., Harvey, A. N., Luck, S. J., & Gold, J. M. (2012). Kraepelin and Bleuler had it right: People with schizophrenia have deficits sustaining attention over time. *Journal of Abnormal Psychology*, *121*, 641-648.
  72. Kappenman, E. S., Kaiser, S. T., Robinson, B. M., Morris, S. E., Hahn, B., Beck, V. M., Leonard, C. J., Gold, J. M., & Luck, S. J. (2012). Response activation impairments in schizophrenia: Evidence from the lateralized readiness potential. *Psychophysiology*, *49*, 73-84.
  73. Leonard, C. J., Kaiser, S. T., Robinson, B. M., Kappenman, E. S., Hahn, B., Gold, J. M., & Luck, S. J. (2012). Toward the neural mechanisms of reduced working memory capacity in schizophrenia. *Cerebral Cortex*.
  74. Lin, P.-H., & Luck, S. J. (2012). Proactive interference does not meaningfully distort visual working memory capacity estimates in the canonical change detection task. *Frontiers in Psychology*, *3*:42, 1-9.
  75. Sawaki, R., Geng, J. J., & Luck, S. J. (2012). A common neural mechanism for preventing and terminating the allocation of attention. *Journal of Neuroscience*, *32*, 10725-10736.
  76. 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.
  77. Gold, J. M., Barch, D. M., Carter, C. S., Dakin, S. C., Luck, S. J., MacDonald III, A. W., Ragland, J. D., Ranganath, C., Kovacs, I., Silverstein, S. M., & Strauss, M. R. (2011). Clinical, functional, and intertask correlations of measures developed by the Cognitive Neuroscience Test Reliability and Clinical Applications for Schizophrenia Consortium. *Schizophrenia Bulletin*, *38*, 144-152.
  78. Gamble, M. L., & Luck, S. J. (2011). N2ac: An ERP component associated with the focusing of attention within an auditory scene. *Psychophysiology*, *48*.
  79. Gibson, B., Wasserman, E., & Luck, S. J. (2011). Qualitative similarities in the visual short-term memory of pigeons and people. *Psychonomic Bulletin & Review*, *18*, 979-984.
  80. Hahn, B., Kappenman, E. S., Robinson, B. M., Fuller, R. L., Luck, S. J., & Gold, J. M. (2011). Iconic decay in schizophrenia. *Schizophrenia Bulletin*, *37*, 950-957.
  81. Hahn, B., Robinson, B. M., Harvey, A. N., Kaiser, S. T., Leonard, C. J., Luck, S. J., & Gold, J. M. (2011). Visuospatial attention in schizophrenia: Deficits in broad monitoring. *Journal of Abnormal Psychology*.
  82. Kappenman, E. S., & Luck, S. J. (2011). Manipulation of orthogonal neural systems together in electrophysiological recordings: The MONSTER approach to efficient neurocognitive assessment. *Schizophrenia Bulletin*, *38*, 92-102.
  83. Leonard, C. J., & Luck, S. J. (2011). The role of magnocellular signals in oculomotor attentional capture. *Journal of Vision*, *11*, 1-12.
  84. Luck, S. J., Ford, J. M., Sarter, M., & Lustig, C. (2011). CNTRICS final biomarker selection: Control of attention. *Schizophrenia Bulletin*. doi: 10.1093/schbul/sbr065

85. Luck, S. J., Mathalon, D. H., O'Donnell, B. F., Spencer, K. M., Javitt, D. C., Ulhaas, P. F., & Hämäläinen, M. S. (2011). A roadmap for the development and validation of ERP biomarkers in schizophrenia research. *Biological Psychiatry, 70*, 28-34.
86. Oakes, L. M., Hurley, K. B., Ross-Sheehy, S., & Luck, S. J. (2011). Developmental changes in infants' visual short-term memory for location. *Cognition, 118*, 293-305.
87. Ross-Sheehy, S., Oakes, L. M., & Luck, S. J. (2011). Exogenous attention influences visual short-term memory in infants. *Developmental Science, 14*, 490-501.
88. Sawaki, R., & Luck, S. J. (2011). Active suppression of distractors that match the contents of visual working memory. *Visual Cognition, 19*, 956-972.
89. Zhang, W., & Luck, S. J. (2011). The Number and Quality of Representations in Working Memory. *Psychological Science, 22*, 1434-1441.
90. Gold, J. M., Hahn, B., Zhang, W., Robinson, B. M., Kappenman, E. S., Beck, V. M., & Luck, S. J. (2010). Reduced capacity but spared precision and maintenance of working memory representations in schizophrenia. *Archives of General Psychiatry, 67*, 570-577.
91. Hahn, B., Robinson, B. M., Kaiser, S. T., Harvey, A. N., Beck, V. M., Leonard, C. J., Kappenman, E. S., Luck, S. J., & Gold, J. M. (2010). Failure of schizophrenia patients to overcome salient distractors during working memory encoding. *Biological Psychiatry, 68*, 603-609.
92. Kappenman, E. S., & Luck, S. J. (2010). The effects of electrode impedance on data quality and statistical significance in ERP recordings. *Psychophysiology, 47*, 888-904.
93. Sawaki, R., & Luck, S. J. (2010). Capture versus suppression of attention by salient singletons: Electrophysiological evidence for an automatic attend-to-me signal. *Attention, Perception, & Psychophysics, 72*, 1455-1470.
94. Toscano, J. C., McMurray, B., Dennhardt, J., & Luck, S. J. (2010). Continuous perception and graded categorization: Electrophysiological evidence for a linear relationship between the acoustic signal and perceptual encoding of speech. *Psychological Science, 21*, 1532-1540.
95. Woodman, G. F., & Luck, S. J. (2010). Why is information displaced from visual working memory during visual search? *Visual Cognition, 18*, 275-295.
96. Hollingworth, A., & Luck, S. J. (2009). The role of visual working memory in the control of gaze during visual search. *Attention, Perception, & Psychophysics, 71*, 936-949.
97. 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*, 1140-1160.
98. 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.
99. Luck, S. J., Kappenman, E. S., Fuller, R. L., Robinson, B., Summerfelt, A., & Gold, J. M. (2009). Impaired response selection in schizophrenia: Evidence from the P3 wave and the lateralized readiness potential. *Psychophysiology, 46*, 776-786.
100. Nuechterlein, K. H., Luck, S. J., Lustig, C., & Sarter, M. (2009). CNTRICS final task selection: Control of attention. *Schizophrenia Bulletin, 35*, 182-196.
101. 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.
102. Zhang, W., & Luck, S. J. (2009). Sudden death and gradual decay in visual working memory. *Psychological Science, 20*, 423-428.
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## 2. Published Reviews of Scholarship

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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. Software and Electronic Resources

ERPLAB Toolbox (<http://erpinfo.org/erplab>).

This is a freely available, NIH-funded, open-source Matlab toolbox for processing and analyzing event-related potential data. As of 12/8/2018, versions 5-7 have been downloaded >19,000 times. Major releases:

ERPLAB Toolbox 1.0 (October 18, 2010)

ERPLAB Toolbox 2.0 (November 16, 2011)  
 ERPLAB Toolbox 3.0 (October 16, 2012)  
 ERPLAB Toolbox 4.0 (October 18, 2013)  
 ERPLAB Toolbox 5.0 (June 25, 2015)  
 ERPLAB Toolbox 6.0 (December 5, 2016)  
 ERPLAB Toolbox 7.0 (December 15, 2017)  
 ERPLAB Toolbox 8.0 (December 15, 2018)

#### 4. Grants and Contracts

##### *Current Extramural Grants and Contracts*

- R01MH076226 Active Maintenance and Cognitive Operations in Visual Working Memory (years 11-15)  
 R01 Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: Dec 4, 2015 through November 30, 2020  
 Direct costs: \$1,125,000 over a 5-year period  
 Indirect costs: \$641,250 over a 5-year period
- R25MH080794 Yearly Workshop in the Event-Related Potential Technique (years 11-15)  
 R25 Award, NIMH  
 Principal Investigators, Steven J. Luck and Emily S. Kappenman (joint PIs)  
 Grant period: 03/01/19 through 12/31/2023  
 Direct costs: \$ 833,853 over a 5-year period  
 Indirect costs: \$ 62,914 over a 5-year period
- R01MH087450 ERPLAB: Extensible, open source software for analysis of event-related potentials (years 6-10)  
 R01 Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: December 1, 2015 through November 31, 2020  
 Direct costs: \$500,000 over a 5-year period  
 Indirect costs: \$267,916 over a 5-year period
- R01MH065034 Cognitive Neuroscience of Attention and Working Memory in Schizophrenia (years 16-20)  
 R01 Award, NIMH  
 Principal Investigators, James M. Gold and Steven J. Luck (joint PIs)  
 Grant period: April 1, 2013 through March 31, 2019  
 Total costs (entire project): \$3,206,403 over a 5-year period  
 Total costs (UCD portion): \$735,491 over a 5-year period
- R01 MH107108 Cognitive-Affective Psychosis Proneness Risk and Protective Factors in 22q11.2DS  
 R01 Award, NIMH  
 Principal Investigator, Tony Simon (Steven J. Luck, co-investigator)  
 Grant Period: 8/1/2015-07/31/20  
 Direct Costs: \$499,999/year
- R01 EY025999 Plasticity, Perception and the Medial Temporal Lobes  
 R01 Award, NEI  
 Principal Investigator, Andrew Yonelinas (Steven J. Luck, co-investigator)  
 Grant Period: 2/1/2016-01/31/21  
 Direct Costs: \$1,250,000 over a 5-year period
- BCS-1630296 The Neural Basis of Human Spatial Navigation in Large-Scale Virtual Spaces with Vestibular Input

NSF Research Grant  
Principal Investigator, Arne Ekstrom (Steven J. Luck, co-investigator)  
Grant Period: 9/1/2016-8/31/2020  
Direct Costs: \$984,585 over a 4-year period

DUE-1625521 Collaborative Proposal: Preparing Undergraduates for Research in STEM-related fields Using Electrophysiology (PURSUE)  
NSF Curriculum Development Grant  
Principal Investigator, Cindy Bukach, University of Richmond (Steven J. Luck, consultant)  
Grant Period: 9/15/2016-9/14/2019  
Direct Costs: \$600,000 over a 3-year period

R01 MH117991 Mechanisms of attentional control: Structure and dynamics from simultaneous EEG-fMRI and machine learning  
R01 Award, NIMH  
Principal Investigator, George R. Mangun (Steven J. Luck, co-investigator)  
Grant Period: 6/8/2018–2/28/2023  
Direct Costs: \$2,123,070 over a 5-year period

R01MH084826 Cognitive Neurocomputational Task Reliability & Clinical Applications Consortium (years 8-12)  
R01 Award, NIMH  
Principal Investigator, Cameron Carter (Steven J. Luck, co-investigator)  
Grant period: 7/1/19-6/30/24  
Direct costs: \$1,530,805 over a 5-year period

#### *Previous Intramural Grants and Contracts*

P30AG010129 Age-related brain changes and visual working memory  
National Institute on Aging pilot grant (via UC-Davis Alzheimer's Disease Center)  
Principal Investigators, Steven J. Luck & Andrew P. Yonelinas  
Grant period: July 1, 2014 – June 30, 2015  
Direct costs: \$31,863 over a 1-year period  
Indirect costs: \$17,684 over a 1-year period

Undergraduate Instructional Improvement Award  
Internal UC-Davis grant used for developing a hybrid version of PSC001  
Principal Investigator, Steven J. Luck  
Grant period: July 1, 2015 through June 30, 2016  
Direct costs: \$17,500

Provost Hybrid Course Award  
Internal UC-Davis grant for developing a hybrid undergraduate course (PSC100Y)  
Principal Investigator, Steven J. Luck  
Grant period: April 1, 2013 through March 31, 2014  
Direct costs: \$12,500 plus \$12,500 matching funds from the Division of Social Sciences

#### *Previous Extramural Grants and Contracts*

U54 HD07912 MIND Institute Intellectual and Developmental Disabilities Research Center  
U54 Award, NICHD  
Principal Investigator, Leonard Abbeduto (Steven J. Luck, Core Co-Director)  
Grant period: 9/24/13-6/30/19  
Total costs: \$6,500,000 over a 5-year period

R25MH080794 Yearly Workshop in the Event-Related Potential Technique (years 6-10)  
R25 Award, NIMH  
Principal Investigator, Steven J. Luck  
Grant period: July 1, 2007 through June 30, 2019  
Direct costs: \$ 682,922 over a 5-year period  
Indirect costs: \$ 54634 over a 5-year period

- R01MH065034 Cognitive Neuroscience of Attention and Working Memory in Schizophrenia (years 11-15)  
 R01 Award, NIMH  
 Principal Investigators, James M. Gold and Steven J. Luck (joint PIs)  
 Grant period: April 1, 2013 through March 31, 2019  
 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
- BCS-1230377 Mechanisms of Attentional Rejection  
 Research Grant, NSF  
 Principal Investigator, Joy J. Geng (Steven J. Luck, co-investigator)  
 Grant period: 9/1/2012 through 8/31/2015  
 Direct costs: \$317,421 over a 3-year period  
 Indirect costs: \$141,380 over a 3-year period
- R01EY022525 Understanding cognitive development in infancy: Attention and visual short-term memory  
 R01 Award, NEI  
 Principal Investigator, Lisa M. Oakes (Steven J. Luck, Co-PI)  
 Grant period: December 1, 2011 through November 30, 2017  
 Direct costs: \$1,000,000 over a 5-year period  
 Indirect costs: \$507,715 over a 5-year period
- R01MH084826 Cognitive Neuroscience Task Reliability & Clinical Applications Consortium (years 4-7)  
 R01 Award, NIMH  
 Principal Investigator, Cameron Carter (Steven J. Luck, investigator)  
 Grant period: 8/22/13-6/30/17  
 Direct costs: \$745,000 over a 4-year period  
 Indirect costs: \$400,000 over a 4-year period
- R01EY017356 Eye Movements and Visual Working Memory (Years 6-10)  
 R01 Award, NEI  
 Principal Investigator, Andrew Hollingworth, Univ of Iowa (Steven J. Luck, consultant)  
 Grant period: October 1, 2011 through September 30, 2016  
 Direct costs: \$1,000,000 over a 5-year period  
 Indirect costs: \$470,879 over a 5-year period
- R01MH076226 Control of Attention by Working Memory (years 6-10)  
 R01 Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: January 1, 2011 through December 31, 2015  
 Direct costs: \$1,000,000 over a 5-year period  
 Indirect costs: \$506,682 over a 5-year period
- R03MH098119 Anxiety and Attention  
 R03 Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: 07/01/13-09/30/15  
 Direct costs: \$100,000 over a 2-year period  
 Indirect costs: \$53,500 over a 5-year period
- R01MH087450 ERPLAB: Extensible, open source software for analysis of event-related potentials (years 1-5)  
 R01 Award, NIMH  
 Principal Investigator, Steven J. Luck  
 Grant period: December 1, 2009 through November 31, 2014  
 Direct costs: \$500,000 over a 5-year period  
 Indirect costs: \$267,916 over a 5-year period
- R01MH076226 Visual Working Memory: Representation and Process (years 1-5)  
 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

R01MH065034 Cognitive Neuroscience of Attention and Working Memory in Schizophrenia (years 6-10)

R01 Award, NIMH  
 Principal Investigators, James M. Gold and Steven J. Luck (joint PIs)  
 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

R01MH065034 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

R25MH080794 Yearly Workshop in the Event-Related Potential Technique (years 1-5)

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

R01MH055714 ERP and fMRI Studies of Visual Attention

R01 Award, NIMH  
 Principal Investigator, G. R. Mangun (Steven J. Luck, co-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

R24MH081807 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

R01MH084826 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

R01HD49840 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

R01EY017356 Eye Movements, Gaze Correction, and Visual Short-Term Memory (Years 1-5)

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

R01MH63001 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

R29MH56877 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

## 5. Professional Presentations

### *Workshops*

Micro ERP Boot Camp. 1-day workshop on ERP methods at Google X Labs in Mountain View, CA (February, 2019).

Birmingham Boot Camp 4.0. Four-day workshop on ERP methods at the University of Birmingham (UK), co-organized with Dr. Emily Kappenman (July, 2018).

Mini ERP Boot Camp. Three-day workshop on ERP methods at the U.S. Air Force Research Laboratory in Dayton, OH (June, 2018).

Mini ERP Boot Camp. Two-day workshop on ERP methods at Carnegie Mellon University, Pittsburgh, PA (May, 2018).

Micro ERP Boot Camp. 1-day workshop on ERP methods as a preconference symposium prior to the 31st Annual CUNY Sentence Processing Conference in Davis, CA (March, 2018).

Mini ERP Boot Camp. Three-day workshop on ERP methods at the University of British Columbia (November, 2017).

Mini ERP Boot Camp. Two-day workshop on ERP methods at Sandia National Laboratories (August, 2017).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2017).

Mini ERP Boot Camp. Three-day workshop on ERP methods at Swarthmore, Bryn Mawr, and Haverford Colleges (June, 2017).

Mini ERP Boot Camp. Two-day workshop on ERP methods at Starkey Hearing Technologies (May, 2017).

Mini ERP Boot Camp. Three-day workshop on ERP methods at the University of Ottawa (February, 2017).

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, 2016).

Birmingham Boot Camp 3.0. Five-day workshop on ERP methods at the University of Birmingham (UK), co-organized with Dr. Emily Kappenman (August, 2016).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2016).

Mini ERP Boot Camp. Three-day workshop on ERP methods at Union College (April, 2016).

Mini ERP Boot Camp. Three-day workshop on ERP methods at Reed College (January, 2016).

Mini ERP Boot Camp. Three-day workshop on ERP methods at Louisiana State University (August, 2015).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2015).

Mini ERP Boot Camp. Three-day workshop on ERP methods at University of Illinois (November, 2014).

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, 2014).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2014).

Mini ERP Boot Camp. Three-day workshop on ERP methods at University of Michigan (June, 2014).

Mini ERP Boot Camp. Three-day workshop on ERP methods at Arizona State University (September, 2013).

Mini ERP Boot Camp. Three-day workshop on ERP methods at Université Catholique de Louvain, Belgium (August, 2013).

Birmingham Boot Camp 2.0. Three-day workshop on ERP methods at University of Birmingham, UK (August, 2013).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2013).

Mini ERP Boot Camp. Three-day workshop on ERP methods at University of Minnesota (January, 2013).

ERPLAB Toolbox Workshop. Two-day workshop on the ERPLAB Toolbox software package, given as a preconference symposium at the Annual Meeting of the Society for Psychophysiological Research (September, 2012).

Mini ERP Boot Camp. Two-day workshop on ERP methods at the Kennedy-Krieger Institute, Johns Hopkins University (September, 2012).

Birmingham Boot Camp. Three-day workshop on ERP methods at University of Birmingham, UK (June, 2012).

Mini ERP Boot Camp. Three-day workshop on ERP methods at University of Copenhagen, Denmark (June, 2012).

Mini ERP Boot Camp. Three-day workshop on ERP methods at University of Toronto (February, 2012).

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, 2011).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2011).

Mini ERP Boot Camp. Two-day workshop on ERP methods at Northwestern University School of Medicine (December, 2010).

Mini ERP Boot Camp. Three-day workshop on ERP methods at UCLA (September, 2010).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2010).

Mini ERP Boot Camp. Three-day workshop on ERP methods at University of Maryland Center for Advanced Study of Language (October, 2009).

Mini ERP Boot Camp. Two-day workshop on ERP methods given at the University of Wisconsin, Madison (August, 2009).

The UC-Davis ERP Boot Camp. Ten-day workshop on ERP methods at UC-Davis (July, 2009).

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 2005).

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

### *Education-Related Presentations*

Using Principles of Psychology (and Live-Online Hybrid Approaches) to Improve the Teaching of Psychology. Invited lecture at the 97<sup>th</sup> Annual Meeting of the Western Psychological Association (April, 2017).

Using Live/Online Hybrid Approaches to Improve and Deepen Learning in Large Courses. Lightning Talk at the UC Davis Scholarship of Teaching and Learning conference (November, 2016).

Creating Effective Lecture Videos. Roundtable presentation at the UC Davis Scholarship of Teaching and Learning conference (November, 2016).

Hybrid Teaching and Learning. Seminar presentation at the Center for Teaching and Learning, Reed College (January 2016).

Transforming the Lecture in the Psychological Sciences. Plenary presentation at the Johns Hopkins University Gateway Science Initiative Symposium on Excellence in Teaching (January 2016).

*Colloquia, Invited Addresses, and Symposia*

Mechanisms for the Suppression of Irrelevant Objects during Visual Search. Keynote presentation at Visual Search and Selective Attention IV, a biennial conference held in Munich, Germany (July, 2018).

Neural Mechanisms of Distractor Suppression. Invited presentation at the Kavli Summer Institute in Cognitive Neuroscience (July, 2018).

A Universal Metric for Data Quality in ERP Research. Invited presentation at Brain Products GmbH, Munich, Germany (July, 2018).

Using EEG and ERPs to Track Attention and Working Memory. Chief Scientist Seminar Series at the U.S. Air Force Research Laboratory in Dayton, OH (June, 2018).

Paying Attention to Attention in Psychosis. CME Presentation at 12<sup>th</sup> Annual UC Davis Psychotic Disorders Conference (November, 2017).

Visual Working Memory and the Computer Metaphor for the Human Mind. Colloquium presentation at North Dakota State University (September, 2017).

Visual Working Memory and the Computer Metaphor for the Human Mind. Colloquium presentation at Brown University (April, 2017).

Visual Working Memory and the Computer Metaphor for the Human Mind. Colloquium presentation at Northwestern University (September, 2016).

Neural Mechanisms of Distractor Suppression. Keynote presentation at the annual meeting of the Sierra Nevada Chapter of the Society for Neuroscience (December, 2015).

Visual Working Memory and the Computer Metaphor for the Human Mind. Colloquium presentation at the University of Rochester (September, 2015).

Working Memory and the Computer Metaphor for the Mind. Keynote presentation at the 20<sup>th</sup> Anniversary Meeting of the Cognitive Science Association for Interdisciplinary Learning, Hood River, OR (July, 2015).

Lateralized Electrical Signatures of Attention in the Human Brain: A 25 Year Retrospective. Keynote presentation at the *International Center for Advanced Studies Workshop on Lateralized Attention in the Brain*, Ludwig-Maximilians-University Munich (March, 2015).

The Control of Visual Attention. Colloquium presentation at the University of Illinois (November, 2014).

ERP Studies of Cognitive Dysfunction in Schizophrenia. Colloquium presentation at the University of Michigan (June, 2014).

Visual Working Memory Capacity: From Psychophysics and Neurobiology to Individual Differences and Psychopathology. Colloquium presentation at George Washington University (November, 2013).

Visual Working Memory Capacity: From Psychophysics and Neurobiology to Individual Differences and Psychopathology. Colloquium presentation at the University of Birmingham, UK (August, 2013).

The Control of Visual Attention. Colloquium presentation at the University of Minnesota (January, 2013).

Visual Working Memory: Representation, Process, Function, and Dysfunction. Robert G. Crowder Memorial Lecture at Yale University (November, 2012).

The Control of Visual Attention. Helmholtz Lecture given at the Helmholtz Research Institute, Universities of Utrecht, Amsterdam and Rotterdam, The Netherlands (June, 2012).

Visual Working Memory: Representation, Process, Function, and Dysfunction. Colloquium presentation at Stanford University (November, 2010).

Neural Systems for the Control of Attention. Invited address at the sixth CNTRICS meeting (Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia) (October, 2010).

ERP Biomarkers in Schizophrenia Research. Invited address at the sixth CNTRICS meeting (Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia) (October, 2010).

Attentional Control and Interactions Between Attention and Working Memory. Colloquium presentation at UC Berkeley (October, 2010).

Visual Working Memory: Representation, Process, Function, and Dysfunction. Colloquium presentation at UC San Diego (October, 2010).

Visual Working Memory: Representation, Process, Function, and Dysfunction. Colloquium presentation at Duke University (March, 2010).

ERPs in Translational Research: Opportunities & Challenges. Invited address at the fourth CNTRICS meeting (Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia) (October, 2009).

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).

The Lateralized Readiness Potential: A Powerful Tool for Studying Action. Symposium organized at the 15th International Congress on Event-Related Potentials of the Brain (April 2009). (Co-organizer along with Emily S. Kappenman)

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 Rochester University, Rochester, NY (April, 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).

## SERVICE

### 1. Professional Service

#### *Current Committees and Positions*

- Research Advisory Panel, UCLA Center for Neurocognition and Emotion in Schizophrenia (2013-present)
- Advisory Council, International Association for the Study of Attention & Performance (1998-present)

#### *Previous Committees and Positions*

- Nominating Committee, The Psychonomic Society (2014-2018)
- Member, APA F. J. McGuigan Dissertation Award Review Committee (2012-2015)
- Member, APA committee to select winner of F. J. McGuigan Early Career Award (2009)
- Chair, APA committee to select winner of APA Early Career Contribution Award (2009)
- Organizing Committee, EPIC XV (Fifteenth International Congress on Event-Related Potentials, 2008-2009)
- 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

Editorial Board of *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (2015-2021)  
 Editorial Board of *Advances in Methods and Practices in Psychological Science* (2017-2018)

### Previous Editorial Positions

Guest Editor, Special Issue of *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (January, 2018); with Molly A. Erickson and Emily S. Kappenman)  
 Associate Editor of *Cognitive, Affective, & Behavioral Neuroscience* (2007-2012)  
 Associate Editor of *Psychonomic Bulletin & Review* (2006-2009)  
 Editorial Board of *Psychological Science* (2009-2014)  
 Editorial Board of *Attention, Perception & Psychophysics* (1998-2014)  
 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

NIH ZMH1 ERB-S BRAIN Initiative Special Emphasis Panel for R25 Proposals (2015)  
 NIH ZRG1 BBBP-Y Adult Psychopathology and Disorders of Aging Panel (2015)  
 NIH ZGM1 SCORE Special Emphasis Panel (2014)  
 NIH BBBP-E Member Conflict Special Emphasis Panel (2012)  
 NIH Biological Basis of Mental Disorders Panel (2011)  
 Chair, NIH BBBP-D Member Conflict Special Emphasis Panel (2010)  
 NIH BBBP-D Member Conflict Special Emphasis Panel (2009)  
 NIH IFCN-A Special Emphasis Review Panel for ARRA Proposals (2009)  
 NIH Special Emphasis Review Panel for Building Translational Research in Integrative Behavioral Science (October, 2007)  
 Ad Hoc Member of NIH Cognition & Perception Study Section (2005)  
 Ad Hoc Member of NIH Integrative, Functional, & Cognitive Neuroscience (COG) Panel, Feb 2004  
 Ad Hoc Member of 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  
 Ad Hoc Member of NIH BBBP-4 (Cognition & Perception) Panel, March 2003  
 Ad Hoc Member of NIH ZRG1 SSS-V Panel, March 2003  
 NIH Special Emphasis Review Panel for Translational Research Centers in Behavioral Science (2002)  
 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)

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*

Boston University  
 Columbia University  
 CUNY  
 Duke University  
 George Mason University  
 George Washington University  
 Harvard University  
 Johns Hopkins University  
 Oregon State University  
 Northwestern University  
 Penn 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, Los Angeles  
 University of California, San Diego  
 University of California, Santa Barbara  
 University of Delaware  
 University of Illinois  
 University of Iowa  
 University of Kansas  
 University of Maryland  
 University of Nebraska  
 University of New Mexico  
 University of Notre Dame  
 University of Oregon  
 University of Rochester  
 University of Toronto  
 Washington University

*Program, Center, and Department Reviews*

Center for Mind, Brain, and Culture, Emory University (2011)

*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)  
 Consultant for Advertising Research Foundation NeuroStandards Project (2010-2011)  
 Participant in NIMH Research Domain Criteria Project, Cognitive Systems Workshop (2011)  
 Interview for the Journal of European Psychology Students Bulletin (2014;  
<http://blog.eipsa.org/2014/10/08/interview-with-prof-luck/>)

## 2. Community Service

### *Public Presentations*

- “Attention and Working Memory in Health and Disease.” Lecture at NeuroFest 2019, a part of Brain Awareness Week (March, 2019)
- “Careers in Academia.” High school class presentation at Da Vinci Academy (December, 2017)
- “Overview of the Center for Mind & Brain.” Presentation to the Woodland Sunrise Rotary Club (August, 2016)
- “Overview of the Center for Mind & Brain.” Presentation to the Woodland Rotary Club (June, 2016)
- “Careers in Academia.” High school class presentation at Da Vinci Academy (September, 2015)
- “Understanding Cognitive Impairments in Schizophrenia.” Presentation to the National Alliance on Mental Illness- Davis Chapter (May, 2015)
- “Schizophrenia and Depression” Presentation to UC-Davis Active Minds mental health advocacy student group (May, 2014)
- “Overview of the Center for Mind & Brain.” Presentation to the Sacramento Entrepreneur’s Organization (January, 2013)
- “Careers in Science.” High school class presentation at Da Vinci Academy (December, 2011)
- “Working Memory: The Brain's Scratchpad.” Plenary Lecture, Johns Hopkins University Center for Talented Youth, Family Academic Program on Neuroscience in the 21st Century (May 2011).
- Television interview for story on distracted driving, Sacramento News10, June 13, 2011
- Interview on *Insight*, KXJZ Sacramento, April 6, 2008
- “Eye, Brain, & Mind.” Presentation at Oaknoll Retirement Home, Iowa City, IA, April 26, 2001
- “Eye, Brain, & Mind.” Talk show presentation on “Iowa Talks,” WSUI, October 20, 2000