

R. H. S. Carpenter: publications

* One of 20 publications to which I would like to draw particular attention

Refereed full papers, books, book chapters

1. *Genest, W., Hammond, R. & **Carpenter, R. H. S.** The random dot tachistogram: a novel task that elucidates the functional architecture of decision. *Nature Scientific Reports* 2016; DOI: 10.1038/srep30787, 1-11
2. Stainer, M. J., **Carpenter, R. H. S.**, Brotchie, P. & Anderson, A. J. Sequences show rapid motor transfer and spatial translation in the oculomotor system. *Vision Research* 2016; 124, 1-6.
3. *Noorani, I. & **Carpenter, R. H. S.** The LATER model of reaction time and decision. *Neuroscience and Biobehavioral Reviews* 2016; 64, 229-251.
4. Bray, T.J.P., **Carpenter, R.H.S.** Saccadic foraging: reduced reaction time to informative targets. *European Journal of Neuroscience* 2015; 41, 908-913.
5. Noorani, I., **Carpenter, R.H.S.** Ultra-fast initiation of a neural race by impending errors. *Journal of Physiology* 2015; 593, 4471-84.
6. Cunniffe, N., Munby, H., Chan, S., Saatci, D., Edison, E., **Carpenter, R.H.S.**, Massey, D., Using saccades to diagnose covert hepatic encephalopathy. *Metabolic Brain Disease* 2015; 30; 821-828.
7. Saleh Y, Marcus HJ, Iorga R, Nouraei R, **Carpenter R.** & Nandi D. (2015). Bedside saccadometry as an objective and quantitative measure of hemisphere-specific neurological function in patients undergoing cranial surgery. *Journal of Clinical Neuroscience* 2015; 22, 280-285
8. Ameqrane, I., Pouget, P., Wattiez, N., **Carpenter, R.**, & Missal, M. Implicit and Explicit Timing in Oculomotor Control. *PlosOne* 2014; 9: DOI: 10.1371/journal.pone.0093958.
9. Ernst, F., Rauchenzauner, M., Zoller, H., Griesmacher, A., Hammerer-Lercher, A., **Carpenter, R.**, Schuessler, G., and Joannidis, M. Effects of 24 h working on-call on psychoneuroendocrine and oculomotor function: A randomized cross-over trial. *Psychoneuroendocrinology* 2014; 47: 221-31.

10. Noorani I. & **Carpenter R. H. S.** Restarting a neural race: anti-saccade correction. *European Journal of Neuroscience* 2014; 39: 159-64.
11. Noorani I. & **Carpenter R. H. S.** Basal Ganglia: Racing to Say No. *Trends in Neurosciences* 2014; <http://dx.doi.org/10.1016/j.tins.2014.07.003>.
12. Anderson, A. J., Stainer, M. J., Brotchie, P. & **Carpenter, R. H. S.** Target direction rather than position determines oculomotor expectation in repeating sequences *Experimental Brain Research* 2014; 232: 2187-95.
13. *Noorani, I., & **Carpenter, R.H.S.** Antisaccades as decisions: LATER model predicts latency distributions and error responses. *European Journal of Neuroscience*, 2013: 37 330-338
14. Burrell, J.R., **Carpenter, R.H.S.**, Hodges, J.R., & Kiernan, M.C. Early saccades in amyotrophic lateral sclerosis. *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration*. 2013; 14: 294-301.
15. Antoniadis, C., Ettinger, U., Gaymard, B., Gilchrist, I., Kristjánsson, A., Kennard, C., Leigh, R.J., Noorani, I., Pouget, P., Smyrnis, N., Tarnowski, A., Zee, D.S., & **Carpenter, R.H.S.** An internationally standardized antisaccade protocol for clinical use. *Vision Research*, 2013: 84: 1-5.
16. Antoniadis, C.A., Xu, Z., **Carpenter, R.H.S.**, and Barker, R.A. The relationship between abnormalities of saccadic and manual response times in Parkinson's disease. *J Parkinson's Disease*, 2013; 3: 557-63.
17. Burrell, J. R., Hornberger, M., **Carpenter, R. H. S.**, Kiernan, M. C. & Hodges, J. R. Saccadic abnormalities in frontotemporal dementia. *Neurology* 2012; 78: 1816-1823
18. Chandna, A., Chandrasekharan, D. P., Ramesh, A. V. & **Carpenter, R. H. S.** Altered interictal saccadic reaction time in migraine: a cross-sectional study. *Cephalalgia*. 2012; 32: 473-480
19. Antoniadis, C. A. & **Carpenter, R. H. S.** Making Neurology Quantitative. *Neuroreport* 2012; 23: 572-575
20. Antoniadis, C. A., **Carpenter, R. H. S.** & Temel, Y. Deep brain stimulation of the subthalamic nucleus in Parkinson's disease: similar improvements in saccadic and manual responses. *Neuroreport* 2012; 23: 179-183

21. **Carpenter, R. H. S.** Analysing the detail of saccadic reaction time distributions. *Biocybernetics and Biological Engineering*. 2012; 32: 49-63.
22. **Carpenter, R. H. S.**, Reddi, B. A. J. *Neurophysiology: A Conceptual Approach*. 5th edition. London: Hodder, 2012.
23. Antoniades, C. A., Ober, J., Hicks, S., Siuda, G., **Carpenter, R. H. S.**, Kennard, C., et al. Statistical characteristics of finger-tapping data in Huntington's disease *Medical and Biological Engineering and Computing* 2012; 50: 341-346
24. Antoniades, C. A., Buttery, P., FitzGerald, J. F., Barker, R. A., **Carpenter, R. H. S** & Watts, C. Deep brain stimulation: eye movements reveal anomalous effects of electrode placement and stimulation. *PLoS One*. 2012; 7: doi: 10.1371/journal.pone.0032830
25. ***Carpenter, R. H. S.** & Reddi, B. 2012 *Neurophysiology: a conceptual approach*. 5th ed. London, Hodder.
26. Pernecky, R., Ghosh, B. C., Hughes, L., **Carpenter, R. H. S.**, Baker, R. A.. & Rowe, J. B. Saccadic latency in Parkinson's disease correlates with executive function and brain atrophy, but not motor severity. *Neurobiology of Disease*. 2011; 43: 79-85
27. *Noorani, I, Gao, M. J., Pearson, B. C. & **Carpenter, R. H. S.** Predicting the timing of wrong decisions. *Experimental Brain Research* 2011; 209: 587-598
28. Dawson, C., Murphy, E., Maritz, C., Chan, H., Ellerton, C., **Carpenter, R. H. S.** & Lachmann, R. H. Dietary treatment of phenylketonuria: the effect of phenylalanine on reaction time. *Journal of Inherited Metabolic Disease*. 2011; 34: 449-454
29. Noorani, I. & **Carpenter R. H. S.** Full reaction time distributions reveal the complexity of neural decision-making. *European Journal of Neuroscience*. 2011; 33: 1948-1951
30. **Carpenter, R. H. S.** What Sherrington missed: the ubiquity of the neural integrator. *Annals of the New York Academy of Sciences*. 2011; 1233: 208-213
31. Walsh, S. R., Nouraei, S. A. R., Tang, T. Y., Sadat, U., **Carpenter, R. H. S.** & Gaunt, M. E. Remote ischemic preconditioning for cerebral and cardiac protection during carotid endarterectomy: results from a pilot randomized clinical trial. *Vascular and Endovascular Surgery*, 2010; 44: 434-439.

32. Antoniadou, C. A., Zheyu, X., Mason, S. L., **Carpenter, R. H. S.** & Barker, R. A. Huntington's disease: changes in saccades and hand-tapping over three years. *Journal of Neurology*. 2010; 257: 1890-1898
33. Krismer, F, Roos J. C. P, Schranz, M., Graziadei, I. W., Mechtcheriakov, S., Vogel, W., **Carpenter, R. H. S.** & Zoller, H. Saccadic Latency in Hepatic Encephalopathy: A Pilot Study. *Metabolic Brain Disease*. 2010. 25, 285-295
34. Anderson, A. J. & **Carpenter, R. H. S.** Saccadic latency in deterministic environments: getting back on track after the unexpected happens. *Journal of Vision*. 2010; 10:14 12
35. Halliday, J. & **Carpenter, R. H. S.** The effect of cognitive distraction on saccadic latency. *Perception* 2010. 39, 41-50.
36. Nouraei, S. A. R, Roos, J. C. P., Walsh, S. R., Ober, J., Gaunt, M. E. & **Carpenter, R. H. S.** Objective assessment of the hemisphere-specific neurological outcome of carotid endarterectomy: a quantitative saccadometric analysis. *Neurosurgery*. 2010; 67: 1534-1541
37. ***Carpenter, R. H. S.**, Reddi, B. A. J., & Anderson, A. J. A simple two-stage model predicts response time distributions. *Journal of Physiology* 2009. 587, 4051-4062.
38. Temel, Y., Visser-Vandewalle, V. & **Carpenter, R. H. S.** Saccadometry: a novel clinical tool for quantification of the motor effects of subthalamic nucleus stimulation in Parkinson's disease . *Experimental Neurology*. 2009; 216: 481-9
39. *Story, G. W. & **Carpenter, R. H. S.** Dual LATER-unit model predicts saccadic reaction time distributions in gap, step and appearance tasks. *Experimental Brain Research*. 2009; 193:287-296
40. *Temel, Y., Visser-Vandewalle, V. & **Carpenter, R. H. S.** Saccadic latency during electrical stimulation of the human subthalamic nucleus. *Current Biology*. 2008;18:R412-4.
41. Anderson, A. J., Yadav, H. & **Carpenter, R. H. S.** Directional prediction by the saccadic system. *Current Biology*. 2008; 18:614-8.
42. Nouraei, S. A. R & **Carpenter, R. H. S.** Development of a planimetry software for digitising printed graphs and historical clinical investigations. *Clinical Otolaryngology*. 2008; 33: 506-7

43. *Roos, J. C. P., Calandrini, D. M. & **Carpenter, R. H. S.** A single mechanism for the timing of spontaneous and evoked saccades. *Experimental Brain Research*. 2008; 187:283-93.
44. Nouraei, S. A. R., Lloyd-Hughes, H., Saleh, H. A. & **Carpenter, R. H. S.** Development of a software for objective assessment of facial symmetry. *Clinical Otolaryngology*. 2008; 33: 1-2
45. Antoniadou, C. A., Bak, T. H., **Carpenter, R. H. S.**, Hodges, J. H. & Barker, R. A. The diagnostic potential of saccadometry in Progressive Supranuclear Palsy. *Biomarkers in Medicine*. 2007; 1:473-81.
46. Reddi, B. A. J. & **Carpenter, R. H. S.** Venous return: cardiomythology? *Clinical Medicine* 2007; 7: 36-37.
47. *Anderson, A. J. & **Carpenter, R. H. S.** The effect of stimuli that isolate S-cones on early saccades and the gap effect. *Proceedings of the Royal Society B*. 2007; 275:335-44.
48. *Oswal, A., Ogden, M. & **Carpenter, R. H. S.** The time-course of stimulus expectation in a saccadic decision task. *Journal of Neurophysiology*. 2007; 97:2722-30.
49. Antoniadou, C. A., Altham, P. M. E., Mason, S. L., Barker, R. A. & **Carpenter, R. H. S.** Saccadometry: a new tool for evaluating pre-symptomatic Huntington patients. *Neuroreport* 2007; 18,1133-1136
50. Emeric, E. E., Brown, J. W., Boucher, L., Hanes, D. P., Harris, R., **Carpenter, R. H. S.** & Schall, J. D. Influence of history on saccade countermanding performance in humans and macaque monkeys. 2007; *Vision Research*, 47: 35-49
51. Pearson, B. C., Armitage, K. R., Horner, C. W. M. & **Carpenter, R. H. S.** Saccadometry: the possible application of latency distribution measurement for monitoring concussion. *British Journal of Sports Medicine* 2007; 41: 610-612
52. *Taylor, M. J., **Carpenter, R. H. S.** & Anderson, A. J. A noisy transform predicts saccadic and manual reaction times to changes in contrast. *Journal of Physiology* 2006; 573: 241-251.
53. Michell, A. W., Xu, Z., Fritz, D., Lewis, S. J. G., Foltynie, T., Williams-Gray, C. H., Robbins, T. W., **Carpenter, R. H. S.** & Barker, R. A. Saccadic latency distributions in Parkinson's disease and the effects of L-dopa. *Experimental Brain Research* 2006; 174: 7-18

54. **Carpenter, R. H. S.** & Anderson, A. J. The death of Schrödinger's cat and of consciousness-based quantum wave-function collapse. *Annales de la Fondation Louis de Broglie* 2006; 31: 1-8
55. *Sinha, N., Brown, J. T. G. & **Carpenter, R. H. S.** Task switching as a two-stage decision process. *Journal of Neurophysiology* 2006; 95: 3146-3153.
56. **Carpenter, R. H. S.** & McDonald, S. A. LATER predicts saccade latency distributions in reading. *Experimental Brain Research* 2006; 177: 176-183.
57. Ali, F. R., Michell, A. W., Barker, R. A. & **Carpenter, R. H. S.** The use of quantitative oculometry in the assessment of Huntington's disease. *Experimental Brain Research* 2006; 169: 237-245
58. **Carpenter, R. H. S.** Does scopesthesia imply extramission? *Journal of Consciousness Studies* 2005; 12: 76-78.
59. **Carpenter, R. H. S.** Visual pursuit: an instructive area of cortex. *Current Biology* 2005; 15: R638-640
60. McDonald, S. A., **Carpenter, R. H. S.** & Shillcock R. C. An anatomically-constrained, stochastic model of eye movement control in reading. *Psychological Review* 2005; 112: 814-840.
61. **Carpenter, R. H. S.** The saccadic system: a neurological microcosm. *Advances in Clinical Neuroscience and Rehabilitation* 2004; 4: 6-8.
62. Reddi, B. A. J. & **Carpenter, R. H. S.** Venous excess: a new approach to cardiovascular control and its teaching. *Journal of Applied Physiology* 2004; 98: 356-364.
63. **Carpenter, R. H. S.** Homeostasis: a plea for a unified approach. *Advances in Physiology Education* 2004; 28: S180-187.
64. **Carpenter, R. H. S.** Contrast, probability and saccadic latency: evidence for independence of detection and decision. *Current Biology* 2004; 14: 1576-1580.
65. Jones, J. G. & **Carpenter, R. H. S.** Hypothesis - ocular monitoring techniques used in anaesthetic sedation may benefit drivers. *Bulletin of the Royal College of Anaesthetists* 2004; 28: 1414-1415.
66. **Carpenter, R. H. S.** Supplementary eye field: keeping an eye on eye movement. *Current Biology* 2004; 14: R416-418.

67. *Reddi, B. A. J. & Asrress, K. N. & **Carpenter, R. H. S.** Accuracy, information and response time in a saccadic decision task. *Journal of Neurophysiology* 2003; 90: 3538-46.
68. Nouraei, S. A. R., de Pennington, N., Jones, J. G. & **Carpenter, R. H. S.** Dose-related effect of sevoflurane sedation on the higher control of eye movements and decision-making. *British Journal of Anaesthesia* 2003; 91: 175-83.
69. Ober, J.K., Przedpelska-Ober, E., Gryniewicz, W., Dylak, J., **Carpenter, R. H. S.** & Ober, J. J. Hand-held system for ambulatory measurement of saccadic durations of neurological patients. In: Gajda J, editor. *Modelling and Measurement in Medicine*. Warsaw: Komitet Biocybernetyki i Inzynierii Biomedycznej PAN, 2003: 187-198.
70. **Carpenter, R. H. S.**, Descamps, M. J. L., Morley, C. H., Leary, T. S. & Jones, J. G. The effect of low dose sevoflurane on saccadic eye movement latency. *Anaesthesia* 2002; 57: 855-859.
71. Zarei, M., Nouraei, S. A. R., Caine, D., Hodges, J. R. & **Carpenter, R. H. S.** Neuropsychological and quantitative oculometric study of a case of sporadic Creutzfeldt-Jakob disease at pre-dementia stage. *Journal of Neurology, Neurosurgery and Psychiatry* 2002; 73: 56-58.
72. **Carpenter, R. H. S.** Reaching out: cortical mechanisms of directed action. *Current Biology* 2002; 12: R517-519.
73. **Carpenter, R. H. S.** *Neurophysiology*. 4th edition. London: Arnolds, 2002.
74. Ratcliff, R., **Carpenter, R. H. S.** & Reddi, B. A. J. Putting noise into neurophysiological models of simple decision making. *Nature Neuroscience* 2001; 4: 336-7.
75. Jandziol, A. K., Prabhu, M., **Carpenter, R. H. S.** & Jones, J. G. Blink duration as a measure of low-level anaesthetic sedation. *European Journal of Anaesthesiology* 2001; 18: 476-484.
76. Asrress, K. N. & **Carpenter, R. H. S.** Saccadic countermanding: a comparison of central and peripheral stop signals. *Vision Research* 2001; 41: 2645-2651.
77. **Carpenter, R. H. S.** Express saccades: is bimodality a result of the order of stimulus presentation? *Vision Research* 2001; 41: 1145-1151.
78. *Leach, J. C. D. & **Carpenter, R. H. S.** Saccadic choice with asynchronous targets: evidence for independent randomisation. *Vision Research* 2001; 41: 3437-45.

79. **Carpenter, R. H. S.** & Reddi, B. A. J. Deciding between the deciders: two models of reaction time may happily coexist. *Nature Neuroscience* 2001; 4: 337.
80. *Reddi, B. A. J. & **Carpenter, R. H. S.** The influence of urgency on decision time. *Nature Neuroscience* 2000; 3: 827-831.
81. **Carpenter, R. H. S.** The neural control of looking. *Current Biology* 2000; 10: 291-293.
82. Jandziol, A. K., Prabhu, M., **Carpenter, R. H. S.** & Jones, J. G. Blink duration: a function of anaesthetic sedation. *British Journal of Anaesthesia* 2000; 84: 278-279P.
83. Hanes, D. P. & **Carpenter, R. H. S.** Countermanding saccades in humans. *Vision Research* 1999; 39: 2777-2791.
84. **Carpenter, R. H. S.** Mouvements oculaires et lecture musicale au piano. *Médecine des Arts* 1999; 28: 8-13.
85. **Carpenter, R. H. S.** Visual selection; neurons that make up their minds. *Current Biology* 1999; 9: 595-598.
86. Khan, O., Taylor, S. J., Jones, J. G., Swart, M., Hanes, D. P. & **Carpenter, R. H. S.** Effects of low-dose isoflurane on saccade eye movement generation. *Anaesthesia* 1999; 54: 142-145.
87. ***Carpenter, R. H. S.** A neural mechanism that randomises behaviour. *Journal of Consciousness Studies* 1999; 6: 13-22.
88. **Carpenter, R. H. S.** & Robson, J. G. Eds. *Vision Research: a Practical Guide to Laboratory Methods*. 1998; Oxford, Oxford University Press.
89. **Carpenter, R. H. S.** *Neurofisiologia*. 2nd edition. Santafé de Bogotá: El Manual Moderno, 1998.
90. **Carpenter, R. H. S.** Sensorimotor processing: charting the frontier. *Current Biology* 1997; 7: 348-351.
91. **Carpenter R. H. S.** Eye movements and the mechanisms of accommodation and the pupil. In: Greger, R. and Windhorst, U., editors. *Comprehensive Human Physiology*. Vol 1. Berlin: Springer Verlag, 1996: 829-837.
92. **Carpenter, R. H. S.** *Neurophysiology*. 3rd edition. London: Arnolds, 1996.
93. ***Carpenter, R. H. S.** & Williams, M. L. L. Neural computation of log likelihood in the control of saccadic eye movements. *Nature* 1995; 377: 59-62.

94. **Carpenter, R. H. S.** & Kinsler, V. Saccadic eye movements while reading music. *Vision Research* 1995; 35: 1447-1458.
95. Merrison, A. F. A. & **Carpenter, R. H. S.** 'Express' smooth pursuit. *Vision Research* 1995; 35: 1459-1462.
96. **Carpenter, R. H. S.** Movement control: Moving the Mental Maps. *Current Biology* 1995; 5: 1082-84.
97. **Carpenter, R. H. S.** *Neurofisiologia*. Milan: Casa Editrice Ambrosiana, 1995.
98. **Carpenter, R. H. S.** Frontal cortex: choosing where to look. *Current Biology* 1994; 4: 341-343.
99. Merrison, A. F. A. & **Carpenter, R. H. S.** Co-variability of smooth and saccadic latencies in oculomotor pursuit. *Ophthalmic Research* 1994; 26: 158-162.
100. **Carpenter, R. H. S.** Express optokinetic nystagmus. In: Fuchs, A. F. & Brandt, T. & Büttner, U. and Zee, D., (editors). *Contemporary ocular motor and vestibular research*. Stuttgart: Georg Thieme, 1994: 185-187.
101. **Carpenter, R. H. S.** The distribution of quick phase intervals in optokinetic nystagmus. *Ophthalmic Research* 1993; 25: 91-93.
102. **Carpenter, R. H. S.** Beyond the Darrow-Yannet diagram: an enhanced plot for body spaces and osmolality. *The Lancet* 1993; 342: 968-970.
103. Sanderson, A. & **Carpenter, R. H. S.** Eye movement desensitization versus image confrontation: a single-session crossover study of 58 phobic subjects. *Journal of Behavioural Therapy and Experimental Psychiatry* 1992; 23: 269-275.
104. **Carpenter, R. H. S.** Ed. *Eye Movements*. London: MacMillan, 1992
105. **Carpenter, R. H. S.** The visual origins of ocular motility. In: **Carpenter, R. H. S.**, editor. *Eye Movements*. London: MacMillan, 1992: 1-10.
106. **Carpenter, R. H. S.** Turning vision into action. *Current Biology* 1992; 2: 288-290.
107. **Carpenter, R. H. S.** Ed., *Eye Movements*. London: MacMillan, 1992
108. **Carpenter, R. H. S.** The visual origins of ocular motility. In: **Carpenter, R. H. S.**, Ed.. *Eye Movements*. London: MacMillan, 1992: 1-10
109. **Carpenter, R. H. S.** *Neurophysiology*. 2nd edition. London: Edward Arnold, 1990.
110. **Carpenter, R. H. S.** Eye-movement machinery. *Physics World* 1989; 2: 41-44.

111. ***Carpenter, R. H. S.** *Movements of the Eyes*. 2nd edition. London: Pion, 1988.
112. **Carpenter, R. H. S.** *Neurofisiología*. 1st edition. Mexico: El Manual Moderno, 1986.
113. **Carpenter, R. H. S.** *Neurophysiology*. 1st edition. London: Edward Arnold, 1984.
114. **Carpenter, R. H. S.** Oculomotor Procrastination. In: Fisher, D. F., Monty, R. A. & Senders, J. W., (editors). *Eye Movements: Cognition and Visual Perception*. Hillsdale: Lawrence Erlbaum, 1981: 237-246.
115. **Carpenter, R. H. S.** Diffusion not the cause of afterimage blurring. *Vision Research* 1978; 18: 837-839.
116. **Carpenter, R. H. S.** *Movements of the Eyes*. 1st edition. London: Pion, 1977.
117. MacLeod, D. I. A., Virsu, V. & **Carpenter, R. H. S.** On mathematical illusions. *Perception and Psychophysics* 1974; 16: 417-418.
118. ***Carpenter, R. H. S.** & Blakemore, C. B. Interactions between orientations in human vision. *Experimental Brain Research* 1973; 18: 287-303.
119. **Carpenter, R. H. S.** Afterimages on backgrounds of different luminance: a new phenomenon and a hypothesis. *Journal of Physiology* 1972; 226: 713-724.
120. ***Carpenter, R. H. S.** Cerebellectomy and the transfer-function of the vestibulo-ocular reflex in the decerebrate cat. *Proceedings of the Royal Society B* 1972; 181: 353-374
121. **Carpenter, R. H. S.** Electrical stimulation of the human eye in different adaptational states. *Journal of Physiology* 1972; 220: 137-148.
122. **Carpenter, R. H. S.** Contour-like phosphenes from electrical stimulation of the human eye: some new observations. *Journal of Physiology* 1972; 229: 767-785.
123. Blakemore, C. B., **Carpenter, R. H. S.** & Georgeson, M. A. Lateral thinking about lateral inhibition. *Nature* 1971; 234: 418-419.
124. Blakemore, C., **Carpenter, R. H. S.** & Georgeson, M. A. Lateral inhibition between orientation detectors in the human visual system. *Nature* 1970; 228: 37-39.
125. Campbell, F. W., **Carpenter, R. H. S.** & Levinson, J. The visibility of aperiodic patterns. *Journal of Physiology* 1969; 204: 283-298.

126. Wolff, J. G., de la Cour, J. & **Carpenter, R. H. S.** The patterns seen when alternating current is passed through the eye. *Quarterly Journal of Experimental Psychology* 1968; 20: 1-10.
127. Brindley, G. S., **Carpenter, R. H. S.** & Rushton, D. N. Reaction times for simple shape discrimination requiring one or both visual cortices. *Quarterly Journal of Experimental Psychology* 1967; 19: 70-72.

Refereed abstracts

128. Nesaratnam, N., Weinberg, I., & **Carpenter, R.H.S.** (2012). Estimating human contrast-dependent visual delay: a new approach using saccadic competition. *Proceedings of the Physiological Society*, 27, PC252.
129. Hänzi, S., Copley, H. & **Carpenter, R. H. S.** Saccadic latency and information foraging. *Journal of Physiology Proceedings*. 2011; 23: PC299
130. Noorani, I. & **Carpenter, R. H. S.** The Timing of Antisaccades. *Journal of Physiology Proceedings*. 2011; 23: PC295
131. Pearson, B. & **Carpenter, R. H. S.** Information supply and neural decision time. *Proceedings of the Physiological Society* 2010; 19: PC230
132. Singh, M. & **Carpenter, R. H. S.** Saccadic latency with unexpected distraction. *Proceedings of the Physiological Society* 2010; 19: PC229
133. **Carpenter, R. H. S.**, Swann, M. F. & Reitter, S. J. An inexpensive solid-state stimulator for ocular pursuit. *Journal of Physiology* 2004: 555P D3.
134. Lamabadusuriya, H. I., Martin, R. I. R. & **Carpenter, R. H. S.** The effect of distractors on saccadic latency. *Journal of Physiology* 2004: 555P PC127.
135. Anderson, A. J. & **Carpenter, R. H. S.** Dynamics of probability prediction in a saccadic latency task. *Journal of Physiology* 2004: 555P D4.
136. Michell, A. W., Luheshi, L., Fritz, D., **Carpenter, R. H. S.**, Spillantini, M. G. & Barker, R. A. Peripheral biomarkers of Parkinson's Disease. *Movement Disorders* 2004: **19**, S276.
137. Adams, M. W. J., Wood, D. & **Carpenter, R. H. S.** Expectation acuity: the spatial specificity of the effect of prior probability on saccadic latency. *Journal of Physiology* 2000; 527: 140-141P.

138. Heywood, H. & **Carpenter, R. H. S.** Blood glucose and saccadic latency. *Journal of Physiology* 1998; 506: 122P.
139. **Carpenter, R. H. S.** SPIC: a PC-based system for rapid measurement of saccadic responses. *Journal of Physiology* 1994; 480: 4P.
140. **Carpenter, R. H. S.** & Jordan, S. A versatile electrode chamber for class experiments on nerve and muscle. *Journal of Physiology* 1993; 459: 301P.
141. **Carpenter, R. H. S.**, Carter, T. & Secker, B. An inexpensive magneto-resistive mechanical transducer for class experiments. *Journal of Physiology* 1993; 459: 300P.
142. **Carpenter, R. H. S.** A simple teaching aid for membrane physiology. *Journal of Physiology* 1972; 229: 16P.
143. Campbell, F. W., **Carpenter, R. H. S.** & Switkes, E. Simple scanning devices for computer modelling of visual processes. *Journal of Physiology* 1971; 217: 18-19P.
144. Blakemore, C. B. & **Carpenter, R. H. S.** A very simple device to measure human eye movements. *Journal of Physiology* 1970; 210: 75-77P.
145. **Carpenter, R. H. S.** Apparatus for quantitative investigation of vestibulo-ocular reflexes. *Journal of Physiology* 1967; 191: 100P.

Other abstracts (very incomplete list)

146. Giorlando, F., Markanday, S., Anderson, A., **Carpenter, R.**, and Berk, M. Temporal Order Assessment in Patients with Bipolar Disorder. *Procedia-Social and Behavioral Sciences* 2014; 126: 216.
147. Anderson, A. J., Stainer, M. J., Brotchie, P. & **Carpenter, R.H.S.** Saccades in unanticipated directions disrupt learnt sequences of gaze. *Clinical and Experimental Ophthalmology* 2013; 41: 121.
148. Ghosh B. C. P., **Carpenter R. H. S.** & Rowe J. B. A Longitudinal Study of Motor, Oculomotor and Cognitive Function in Progressive Supranuclear Palsy. *PLoS ONE* 2013; 8.
149. Burrell, J., Hornberger, M., **Carpenter, R. H. S.**, Kiernan, M. C., & Hodges, J. R. Disinhibition of "early" saccades in frontotemporal dementia. *Dementia and Geriatric Cognitive Disorders* 2012; 33:203-4.

150. Burrell, J., Hornberger, M., **Carpenter, R. H. S.**, Kiernan, M. C., & Hodges, J. R. Abnormal saccades detect frontal dysfunction in motor neuron disease. *Clinical Neurophysiology* 2012; 123:e74.
151. Missal, M., Quenon, L., Modena, J. & **Carpenter, R.** Saccadic latency as a window on temporal processing. *Society for Neuroscience* 2012
152. Roos J. C. P., Lachmann R. H., **Carpenter R. H. S.** & Cox, T. M. Latency vs saccadic parameters in lysosomal trials. *Ophthalmology* 2011; 98: 794.
153. Ghosh, B., Rowe, J., **Carpenter, R. H. S.**, Calder, A., Peers, P., Lawrence, A. & Hodges, J. Saccadic correlates of cognition in progressive supranuclear palsy. *Journal of Neurology, Neurosurgery and Psychiatry* 2010; 81: E29
154. Perneczky, R., Gosh, B. C. P., Hughes, L., **Carpenter, R. H. S.**, Barker, R. A., & Rowe, J. B. Associations between regional brain atrophy, executive control, and saccadic latency in Parkinson's disease and healthy ageing. *Alzheimer's & Dementia* 2010; 6: S292-3.
155. Schranz, M., Krismer, F., Roos, J., Graziadei, I., Mechtcheriakow, S., Vogel, W., **Carpenter, R. H. S.** & Zoller, H. Saccadic latency as an objective and quantitative marker of hepatic encephalopathy. 2010; *Journal of Hepatology* 52: S215.
156. Antoniadou, C. A., Xu, Z., **Carpenter, R. H. S.**, & Barker, R. A. Do different pharmacological treatments have different effects on saccadic eye movement abnormalities in Parkinson's disease. *Movement Disorders* 2009; 24: S346-7.
157. Chandna, A., Chantrasekharan, D., Ramesh, A. & **Carpenter, R. H. S.** Could saccadometry be beneficial in the diagnosis and understanding of migraine? *Cephalalgia* 2009; 29: 39-40
158. Roos, J. C. P., Lachmann, R. H., **Carpenter, R. H. S.**, & Cox, T. M. Validation of saccadic latency as a biomarker of cerebral injury in Tay-Sachs related disorders. *Annals of Neurology* 2008; 64: S30-1
159. Antoniadou, C. A., Xu, Z., **Carpenter, R. H. S.**, & Barker, R. A. Saccadic latencies as a biomarker for Huntington's and Parkinson's disease. *Movement Disorders* 2008; 23: S188.
160. Anderson, A. J. & **Carpenter, R. H. S.** Saccadic latency in stochastic and deterministic environments. 2008; *ARVO* 2008

161. Roos, J. P., Krismer, F., Vogel, W., **Carpenter, R. H. S.** & Zoller, H. M. Saccadic latencies: A novel assessment in hepatic encephalopathy. 2006; *Hepatology* 44: 461A.
162. Anderson, A. J., Yadav H. & **Carpenter, R. H. S.** The influence of return-to-fixation eye movements on saccadic latency. *Proceedings of the Australian Neuroscience Society* 2006; 17, 61.
163. Roos, J. C. P., Lachmann, R. H., **Carpenter, R. H. S.**, & Cox, T. M. Using saccadic latency to quantify cognitive function. 2006; *American Neurological Association: 131st Annual Meeting*.
164. Roos, J. C. P., Lachmann, R., Cox, T. & **Carpenter, R. H. S.** Saccadometry for estimating cerebral damage in storage diseases. *Acta Paediatrica* 2006; 95: 141
165. Roos, J. C. P., Calandrini, D. M., & **Carpenter, R. H. S.** The relation between evoked and spontaneous saccadic latencies. *Annals of Neurology* 2005; 58: Dec
166. Michell, A., F Ali, Z.X., Fritz, D., Lewis, S., and **Carpenter, R.** Saccadic eye movements: A useful clinical biomarker in neurodegeneration? *Movement Disorders* 2005; 20: S59-60.
167. Anderson, A. & **Carpenter, R. H. S.** Using eye movements to study how past experiences shape expectations. *Australian Journal of Psychology* 2005; 57: 43
168. Jones J. G., **Carpenter R. H. S.** & Lewis KE. Excessive daytime sleepiness and driving: regulations for road safety. *Clinical Medicine* 2004; 4: 595.
169. Anderson, A. & **Carpenter, R. H. S.** Latency distributions for the reversal of optokinetic nystagmus. *Investigative Ophthalmology and Visual Science* 2004; 45: U955
170. Nouraei, R., Hadinnapola, C., Alladi, S., Roos, J., Gaunt, M., & **Carpenter, R.** Objective hemisphere-specific assessment of the neurological outcome of carotid endarterectomy using quantitative oculometry. *British Journal of Surgery* 2004; 91: 14.
171. Michell, A. W., Luheshi, L., Fritz, D., **Carpenter, R. H. S.**, Spillantini, M. G., and Barker, R. Peripheral biomarkers of Parkinson's disease. 2004; *Movement Disorders* 19, S276-S276.
172. Ware, J. S., Blount, P. R., & **Carpenter R. H. S.** The dynamics of expectation: rapid effects of probabilistic cues on saccadic latency. In: Strick PL, editor. *Neural Control of Movement: 11th Annual Meeting*. Seville, 2001: D-04.

173. **Carpenter R. H. S.** & Hanes, D. P. Countermanding saccades in humans. *Society for Neuroscience Abstracts* 1997; 23: 757.

Book reviews, miscellanea

174. **Carpenter, R. H. S.** Coloured dots. *New Scientist* 2016; 231: 57.

175. **Carpenter, R. H. S.** Beyond the impact factory. *Current Biology* 2008; 18: 687.

176. **Carpenter, R. H. S.** Peerless review. *Journal of the Royal Society of Medicine* 2006; 99: 384-385

177. **Carpenter, R. H. S.** Q & A *Current Biology* 2004; 14: 941R

178. **Carpenter, R. H. S.** Eye movement research: Mechanisms, processes and applications *Perception* 1996; 25: 1379-1380

179. **Carpenter, R. H. S.** Must try harder. *New Scientist* 1993; 138: 49

180. **Carpenter, R. H. S.** Reprocessed processing. *Times Literary Supplement* 1987; 26 June: 689

Published software includes *EPIC*, *SPIC* and *NeuroLab*