

## COMPREHENSIVE EXAM READING LIST: PERCEPTION

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### Current Committee Members

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### Journals

Below is a list of journals you should monitor for content relevant articles. While we will not ask a question solely on the content of recent articles, we may ask questions that ask you to apply what you know from the content of the reading list below to a current issue or hot topic of recent articles.

- *Attention, Perception, & Psychophysics*
- *Journal of Experimental Psychology: Human Perception and Performance*
- *Visual Cognition*
- *Perception*
- *Journal of the Acoustical Society of America*
- *Vision Research*
- *Journal of Vision*

### References

Below are two reference books that may provide useful background that will help one understand the articles.

- Moore, B.C.J. (2003). *An introduction to the psychology of hearing*. Academic Press (5<sup>th</sup> Edition).
- Goldstein, E.B. *Sensation and Perception: Chapters 1-13*. 7<sup>th</sup> or 8<sup>th</sup> editions.
- Handel, S. (1989). *Listening: An introduction to the perception of auditory events*. Cambridge, MA: The MIT Press.

### Foundations

1. Gibson, J.J. (1979). The theory of information pickup and its consequences. In *The ecological approach to visual perception* (pp. 238-263). Boston, MA: Houghton Mifflin Co.
2. Cornsweet, T. (1970). The Experiment of Hecht, Schlaer, and Pirenne. In *Visual Perception*. New York, NY: Academic Press.
3. Garner, W. R., & Morton, J. (1969). Perceptual independence: Definitions, models, and experimental paradigms. *Psychological Bulletin*, 72(4), 233-259.
4. Hirsh, I. J., & Sherrick, C. E. (1961). Perceived order in different sense modalities. *Journal of Experimental Psychology*, 62, 423 – 32.
5. Campbell, F.W., & Robson, J.G. (1968). Application of Fourier analysis to the visibility of gratings. *Journal of Physiology*, 197, 551-566.
6. Marr, D. (1982). Chapter 1. In *Vision: A Computational Investigation into the Human Representation and Processing of Visual Information* (pp. 8-38).

### Early Vision - Receptive Fields, Feature Detectors and Maps

7. Hubel, D.H., Wiesel, T.N. (1968). Receptive fields and functional architecture of monkey striate cortex. *Journal of Physiology*, 195, 215-243.
8. Blakemore, C., Campbell, F.W. (1969). On the existence of neurones in the human visual system selectively sensitive to the orientation and size of retinal images. *Journal of Physiology*, 203, 237-260.
9. Field, D.J. (1987). Relations between the statistics of natural images and the response properties of cortical cells. *Journal of the Optical Society of America A*, 4, 2379-2394.
10. Olshausen, B.A., Field, D.J. (1996). Emergence of simple-cell receptive field properties by learning a sparse code for natural images. *Nature*, 381, 607-609.

11. Leopold, D. A., & Logothetis, N. K. (1996). Activity changes in early visual cortex reflect monkeys' percepts during binocular rivalry. *Nature*, *379*, 549-553.

#### Mid-Level Vision – Motion, Color, and Perceptual Features

12. Britten, K.H., Newsome, W.T., Shadlen, M.N., Celebrini, S., & Movshon, J.A. (1996). A relationship between behavioral choice and the visual responses of neurons in macaque MT. *Visual Neuroscience*, *13*(1), 87-100.
13. Maunsell, J.H.R., & Van Essen, D.C. (1983). Functional properties of neurons in middle temporal visual area of the macaque monkey. I. Selectivity for stimulus direction, speed, and orientation. *Journal of Neurophysiology*, *49*(5), 1127-1147.
14. Britten, K.H., Shadlen, M.N., Newsome, W.T., & Movshon, J.A. (1992). The analysis of visual motion: a comparison of neuronal and psychophysical performance. *Journal of Neuroscience*, *12*, 4745-4765.
15. Gegenfurtner, K. R., & Kiper, D. C. (2003). Color vision. *Annual Review of Neuroscience*, *26*, 181-206.
16. Holway, A. F., & Boring, E. G. (1941). Determinants of apparent visual size with distance variant. *American Journal of Psychology*, *54*, 21-37.
17. Livingstone, M., Hubel, D. (1988). Segregation of form, color, movement, and depth: anatomy, physiology, and perception. *Science*, *240*, 740-749.

#### Higher Level Vision

18. Goodale, M.A., Milner, A.D. (1992). Separate visual pathways for perception and action. *Trends in Neuroscience*, *15*, 20-25.
19. Mishkin, M., Ungerleider, L.G., Macko, K.A. (1983). Object vision and spatial vision: Two cortical pathways. *Trends in Neuroscience*, *6*, 414-417.
20. Yarbus (1967). *Eye movements and vision*. (B. Haigh, Trans.). New York, NY: Plenum Press. Chapter 6.
21. Rayner, K., & Pollastek, A. (1992). Eye movements and scene perception. *Canadian Journal of Psychology*, *46*(3), 342-376.
22. Johansson, G. (1973). Visual perception of biological motion and a model for its analysis. *Perception & Psychophysics*, *14*, 201-211.
23. Biederman, I. (1987). Recognition-by-components: a theory of human image understanding. *Psychological Review*, *94*, 115-147.
24. Hollingworth, A. (2004). Constructing visual representations of natural scenes: The roles of short- and long-term visual memory. *Journal of Experimental Psychology: Human Perception & Performance*, *30*(3), 519-537.
25. Rock, I., & Palmer, S. (1990). The legacy of gestalt psychology. *Scientific American*, *263*, 84-90.
26. Treisman, A.M. (1998). Feature binding, attention and object perception. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *353*, 1205-1306.
27. Tarr, M.J., Bülthoff, H.H. (1998). Image-based object recognition in man, monkey and machine. *Cognition*, *67*, 1-20.
28. Grill-Spector, K., Kourtzi, Z., & Kanwisher, N. (2001). The lateral occipital complex and its role in object recognition. *Vision Research*, *41*, 1409-1422.

#### Auditory Psychophysics and Physiology

29. d'Cheveigné, A. (2005). Pitch Perception Models. In C. J. Plack, A. J. Oxenham, R. R. Fay, & A. N. Popper (Eds.), *Pitch*. Birkhäuser.
30. Greenberg, G. Z., & Larkin, W. D. (1968). Frequency-response characteristic of auditory observers detecting signals of a single frequency in noise: The probe-signal method. *Journal of the Acoustical Society of America*, *44*(6), 1513-1523.
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#### Auditory Scene Analysis

35. Bregman, A. S., & Rudnick, A. (1975). Auditory segregation: Stream or streams? *Journal of Experimental Psychology: Human Perception and Performance*, *1*, 263 – 267.
36. Deutsch, D. (1980). The processing of structured and unstructured tone sequences. *Perception & Psychophysics*, *28*, 381-389.
37. Darwin, C.J. (1997). Auditory grouping. *Trends in Cognitive Sciences*, *1*, 327-333.
38. Griffiths, T.D., & Warren, J.D. (2004). What is an auditory object? *Nature Reviews Neuroscience*, *5*, 886 – 892.
39. Jones, M. R., Kidd, G. R., & Wetzell, R. (1981). Evidence for rhythmic attention. *Journal of Experimental Psychology: Human Perception & Performance*, *7*, 1059 – 1073.
40. Kubovy, M., & Valkenburg, D.V. (2001). Auditory and visual objects. *Cognition*, *80*, 97 – 126.
41. van Noorden, L. P. A. S. (1977). Minimum differences of level and frequency for perceptual fission of tone sequences ABAB. *Journal of the Acoustical Society of America*, *61*, 1041–1045.

#### Music, Speech and Environmental Sounds

42. Dewitt, L., & Samuel, A. G. (1990). The role of knowledge-based expectations in music perception: evidence from musical restoration. *Journal of Experimental Psychology: General*, *119*, 123 – 144.
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46. McAuley, J. D. (2010). Tempo and rhythm. In M. R. Jones, R. R. Fay, & A. N. Popper (Eds.). *Music Perception: Springer Handbook of Auditory Research*, (pp. 165-199). Springer Science.
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