

## **George Sperling**

- Publications
- Reprintings of Publications
- Unpublished Bell Laboratories Technical Memoranda
- Talks at Conferences and Meetings of Professional Societies
- Invited Lectures at Universities and Institutes

### Publications (including Published Abstracts)

- 1960 Sperling, G. (1960). The information available in brief visual presentations. *Psychological Monographs: General and Applied*, 74,(11, Whole No. 498).
- 1960 Sperling, G. (1960). Negative afterimage without prior positive image [Abstract]. *Journal of the Optical Society of America*, 50, 515.
- 1960 Sperling, G. (1960). Negative afterimage without prior positive image. *Science*, 131, 1613-1614.
- 1960 Sperling, G. (1960). Bistable aspects of monocular vision. *Journal of the Optical Society of America*, 50, 1140-1141. [Abstract]
- 1961 Sperling, G. (1961). Impulse responses in foveal vision. *Journal of the Optical Society of America*, 51, 474. [Abstract]
- 1961 Averbach, E., & Sperling, G. (1961). Short term storage of information in vision. In C. Cherry (Ed.), *Information theory* (pp. 196-211). Washington, DC: Butterworth & Co.
- 1962 Sperling, G. (1962). Visual masking of "flashes" of darkness by "flashes" of darkness. *Journal of the Optical Society of America*, 52, 603. [Abstract]
- 1962 Sperling, G. (1962). Visual masking by impulse flashes as a function of masking stimulus energy and background intensity. *American Psychologist*, 17, 354. [Abstract]
- 1962 Sperling, G. (1962). Visual information storage. In *Proceedings of the Sixteenth International Congress of Psychology, Bonn 1960* (pp. 558-559). Amsterdam: North-Holland Publishing Co. also *Acta Psychologica*, 1961, 19(1), 558-559. [Abstract]
- 1963 Sperling, G. (1963). A model for visual memory tasks. *Human Factors*, 5, 19-31.
- 1963 Novak, S., & Sperling, G. (1963). Visual thresholds near a continuously visible or briefly presented light-dark boundary. *Optica Acta*, 10, 187-191.
- 1963 Sperling, G. (1963). Essential nonlinearity of visual masking by flickering light. *Journal of the Optical Society of America*, 53, 520-521. [Abstract]
- 1964 Sperling, G. (1964). What visual masking can tell us about the temporal factors in perception. In *Proceedings of the Seventeenth International Congress of Psychology, Washington, D.C. 1963* (pp. 199-200). Amsterdam: North Holland Publishing Co. [Abstract]
- 1964 Sperling, G., & Speelman, R. G. (1964). Spatial localization during eye movements. *American Psychologist*, 19, 526-527. [Abstract]
- 1964 Sperling, G. (1964). Linear theory and the psychophysics of flicker. *Documenta Ophthalmologica*, 18, 3-15.
- 1965 Sperling, G. (1965). Temporal and spatial visual masking. I. Masking by impulse flashes. *Journal of the Optical Society of America*, 55, 541-559.
- 1965 Sperling, G., & Speelman, R. G. (1965). Visual spatial localization during object motion, apparent object motion, and image motion produced by eye movements. *Journal of the Optical Society of America*, 55, 1576-1577. [Abstract]
- 1966 Sperling, G. (1966). Comparisons of real and apparent motion. *Journal of the Optical Society of America*, 56, 1442. [Abstract]

- 1967 Sperling, G. (1967). Successive approximations to a model for short-term memory. *Acta Psychologica*, 27, 285-292.
- 1967 Novak, S., & Sperling, G. (1967). Increment thresholds [Letter]. *Journal of the Optical Society of America*, 57, 542.
- 1968 Sperling, G. (1968). Phonemic model of short-term auditory memory. In *Proceedings, 76th Annual Convention of the American Psychological Association*, 3, 63-64.
- 1968 Sperling, G., & Sondhi, M. M. (1968). Model for visual luminance discrimination and flicker detection. *Journal of the Optical Society of America*, 58, 1133-1145.
- 1968 Sperling, G. (1968). Energy-level models of binocular vision. *Journal of the Optical Society of America*, 58, 1559. [Abstract]
- 1970 Sperling, G. (1970). Extremely rapid visual scanning. *Bulletin of the British Psychological Society*, 23, 58. [Abstract]
- 1970 Sperling, G., & Speelman, R. G. (1970). Acoustic similarity and auditory short-term memory: Experiments and a model. In D. A. Norman (Ed.), *Models of human memory* (pp. 149-202). New York: Academic Press.
- 1970 Sperling, G. (1970). Model of visual adaptation and contrast detection. *Perception and Psychophysics*, 8, 143-157.
- 1970 Sperling, G. (1970). Short-term memory, long-term memory, and scanning in the processing of visual information. In F. A. Young & D. B. Lindsley (Eds.), *Early experience and visual information processing in perceptual and reading disorders* (pp. 198-218). Washington, DC: National Academy of Sciences.
- 1970 Sperling, G. (1970). Binocular vision: A physical and a neural theory. *American Journal of Psychology*, 83, 461-534.
- 1971 Sperling, G. (1971). Information retrieval from two rapidly consecutive stimuli: A new analysis. *Perception and Psychophysics*, 9, 89-91.
- 1971 Sperling, G. (1971). After one hundred years of research in perception, what's new? New models. In *Proceedings of the Nineteenth International Congress of Psychology, London, England, 1969* (p. 209). London: British Psychological Society. [Abstract]
- 1971 Sperling, G. (1971). Computer parasites and hosts: Practical advice on how to be a successful parasite at your host's computer installation. *Behavior Research Methods and Instrumentation*, 3, 147-148.
- 1971 Sperling, G. (1971). The description and luminous calibration of CRO visual displays. *Behavior Research Methods and Instrumentation*, 3, 148-151.
- 1971 Sperling, G. (1971). Flicker in computer-generated visual displays: Selecting a CRO phosphor and other problems. *Behavior Research Methods and Instrumentation*, 3, 151-153.
- 1971 Sperling, G. (1971). Stereoscopic visual displays: Principles, viewing devices, alignment procedures. *Behavior Research Methods and Instrumentation*, 3, 154-158.
- 1971 Sperling, G., Budiansky, J., Spivak, J. G., & Johnson, M. C. (1971). Extremely rapid visual search: The maximum rate of scanning letters for the presence of a numeral. *Science*, 174, 307-311.

- 1974 Sperling, G. (1974). Structural factors in short-term memory. In *Proceedings of the XXth International Congress of Psychology, August 13-19, 1972* (pp. 182-3). Tokyo: University of Tokyo Press. [Abstract]
- 1974 Sperling, G. (1974). Visual masking. In *Proceedings of the XXth International Congress of Psychology, August 13-19, 1972* (p. 255). Tokyo: University of Tokyo Press. [Abstract]
- 1975 Sperling, G. (1975). Multiple detections in a brief visual stimulus: The sharing and switching of attention. *Bulletin of the Psychonomic Society*, 6, 427. [Abstract]
- 1976 Sperling, G., & Melchner, M. J. (1976). Estimating item and order information. *Journal of Mathematical Psychology*, 13, 192-213.
- 1976 Sperling, G. (1976). Movement perception in computer-driven visual displays. *Behavior Research Methods and Instrumentation*, 8, 144-151.
- 1976 Sperling G., & Melchner, M. J. (1976). Visual search and visual attention. In V. D. Glezer (Ed.), *Proceedings of the Fourth Symposium of Sensory System Physiology: Information Processing in Visual System* (pp. 224-230). Leningrad: Academy of Sciences, Pavlov Institute of Physiology.
- 1976 Sperling, G., & Reeves, A. (1976). Reaction time of an *Unobservable* response. *Bulletin of the Psychonomic Society*, 8, 247. [Abstract]
- 1978 Sperling, G. (1978). Future prospects in language and communication for the congenitally deaf. In L. Liben (Ed.), *Deaf children: Developmental perspectives* (pp. 103-114). New York: Academic Press.
- 1978 Sperling, G., & Melchner, M. J. (1978). Visual search, visual attention, and the attention operating characteristic. In J. Requin (Ed.), *Attention and performance VII* (pp. 675-686). Hillsdale, NJ: Erlbaum.
- 1978 Sperling, G., & Melchner, M. J. (1978). The attention operating characteristic: Examples from visual search. *Science*, 202, 315-318.
- 1978 Burt, P., & Sperling, G. (1978). Contribution of spatial and temporal separation and of feature similarity to perceived movement. *Investigative Ophthalmology and Visual Science*, April[Suppl.], 287. [Abstract]
- 1978 Sperling, G., & Reeves, A. (1978). Measuring the reaction time of a shift of visual attention. *Investigative Ophthalmology and Visual Science*, April[Suppl.], 289. [Abstract]
- 1978 Burt, P., Sperling, G., & Julesz, B. (1978). The range of stereopsis. *Journal of the Optical Society of America*, 68, 1365. [Abstract]
- 1979 Sperling, G. (1979). This week's citation classic: Sperling, G. The information available in brief visual presentations. *Psychological Monogr.* 74: 1-29, 1960. *Current Contents*, 11 (21), 18.
- 1979 Kowler, E., & Sperling, G. (1979). Saccade-like image perturbations do not aid visual information processing. *Investigative Ophthalmology and Visual Science*, April[Suppl.], 140. [Abstract]
- 1979 Sperling, G. (1979). Critical duration, supersummation, and the narrow domain of strength-duration experiments. *The Behavioral and Brain Sciences*, 2, 279-281.
- 1980 Kowler, E., & Sperling, G. (1980). Transient stimulation does not aid visual search: Implication for the role of saccades. *Perception and Psychophysics*, 27, 1-10.
- 1980 Didner, R., & Sperling, G. (1980). Perceptual delay: A consequence of metacontrast and apparent motion. *Journal of Experimental Psychology: Human Perception and Performance*, 6, 235-243.

- 1980 Sperling, G., & Reeves, A. (1980). Measuring the reaction time of a shift of visual attention. In R. Nickerson (Ed.), *Attention and performance VIII* (pp. 347-360). Hillsdale, NJ: Erlbaum.
- 1980 Sperling, G. (1980). Bandwidth requirements for video transmission of American Sign Language and finger spelling. *Science*, *210*, 797-799.
- 1981 Burt, P., & Sperling, G. (1981). Time, distance, and feature trade-offs in visual apparent motion. *Psychological Review*, *88*, 171-195.
- 1981 Sperling, G. (1981). Mathematical models of binocular vision. In S. Grossberg, (Ed.), *Proceedings of the Symposium in Applied Mathematics of the American Mathematical Society and the Society for Industrial and Applied Mathematics: Vol. 13. Mathematical Psychology and Psychophysiology* (pp. 281-300). Providence, RI: American Mathematical Society.
- 1981 Sperling, G. (1981). Video transmission of American Sign Language and finger spelling: Present and projected bandwidth requirements. In A. Habibi & A. N. Netravali (Eds.), *IEEE Transactions on Communications [Special Issue on Picture Communication Systems]*, *Com-29*, 1993-2002.
- 1983 Sperling, G., Pavel, M., Cohen, Y., Landy, M. S., & Schwartz, B. J. (1983). Image processing in perception and cognition. In O. J. Braddick & A. C. Sleigh (Eds.), *Proceedings of Rank Prize Funds International Symposium at The Royal Society of London, 1982. Springer Series in Information Sciences: Vol. 11. Physical and Biological Processing of Images* (pp. 359-378). Berlin: Springer-Verlag,
- 1983 Sperling G. (1983). Why we need iconic memory. *The Behavioral and Brain Sciences*, *6*, 37-39.
- 1983 Farrell, J. E., Pavel, M., & Sperling, G. (1983). Visible persistence of stimuli in apparent motion. *Investigative Ophthalmology and Visual Science*, *24*(Suppl. 3), 95. [Abstract]
- 1983 Schwartz, B. J., & Sperling, G. (1983). Nonrigid 3D percepts from 2D representations of rigid objects [Abstract]. *Investigative Ophthalmology and Visual Science*, *24*(Suppl. 3), 239.
- 1983 Kowler, E., & Sperling, G. (1983). The role of saccade-like stimulus transients in visual information processing [Abstract]. *Investigative Ophthalmology and Visual Science*, *24*(Suppl. 3), 271.
- 1983 van Santen, J. P. H., & Sperling, G. (1983). A temporal covariance model of motion perception [Abstract]. *Investigative Ophthalmology and Visual Science*, *24*(Suppl. 3), 277.
- 1983 Sperling, G., & Reeves, A. (1983). Gating model of visual attention [Abstract]. *Bulletin of the Psychonomic Society*, *21*, 354.
- 1983 Kowler, E., & Sperling, G. (1983). Abrupt onsets do not aid visual search. *Perception and Psychophysics*, *34*, 307-313.
- 1983 Schwartz, B. J., & Sperling, G. (1983). Luminance controls the perceived 3D structure of dynamic 2D displays. *Bulletin of the Psychonomic Society*, *21*, 456-458.
- 1984 Sperling, G. (1984). A unified theory of attention and signal detection. In R. Parasuraman & D. R. Davies (Eds.), *Varieties of attention* (pp. 103-181). New York: Academic Press.
- 1984 van Santen, J. P. H., & Sperling, G. (1984). Temporal covariance model of human motion perception. *Journal of the Optical Society of America A: Optics and Image Science*, *1*, 451-473.
- 1984 van Santen, J. P. H., & Sperling, G. (1984). Applications of a Reichardt-type model to two-frame motion [Abstract]. *Investigative Ophthalmology and Visual Science*, *25*(Suppl. 3), 14.
- 1984 Reeves, A., & Sperling, G. (1984). Visual temporal order perception [Abstract]. *Investigative Ophthalmology and Visual Science*, *25*(Suppl. 3), 69.

- 1984 Weichselgartner, E., & Sperling, G. (1984). Psychophysical method for the continuous measurement of visible persistence [Abstract]. *Investigative Ophthalmology and Visual Science*, 25(Suppl. 3), 70.
- 1984 Landy, M. S., & Sperling, G. (1984). Image processing in visual psychophysical research [Abstract]. *Investigative Ophthalmology and Visual Science*, 25(Suppl. 3), 72.
- 1984 Landy, M. S., Cohen, Y., & Sperling, G. (1984). HIPS:<sup>†</sup> Image processing under Unix. Software and applications. *Behavior Research Methods and Instrumentation*, 16, 199-216.  
<sup>†</sup>HIPS is the **H**uman Information Processing Laboratory's **I**mage **P**rocessing **S**ystem.
- 1984 Sperling, G. (1984). Image processing studies of American Sign Language [Abstract]. *Journal of Psycholinguistic Research*, 13, 494.
- 1984 Sperling, G., Parish, D. H., Pavel, M., & Desaulniers, D. H. (1984). Auditory list recall: Phonemic structure, acoustic confusability, and familiarity [Abstract]. *Bulletin of the Psychonomic Society*, 22, 292.
- 1984 Doshier, B. A., Sperling, G., & Wurst, S. (1984). Stereopsis versus proximity-luminance covariance as determinants of perceived three-dimensional structure [Abstract]. *Journal of the Optical Society of America A: Optics and Image Science*, 1, 1254.
- 1984 Landy, M. S., Cohen, Y., & Sperling, G. (1984). HIPS:<sup>†</sup>: A Unix-based image processing system. *Computer Vision, Graphics, and Image Processing*, 25, 331-347.  
<sup>†</sup>HIPS is the **H**uman Information Processing Laboratory's **I**mage **P**rocessing **S**ystem.
- 1985 van Santen, J. P. H., & Sperling, G. (1985). Elaborated Reichardt detectors. *Journal of the Optical Society of America A: Optics and Image Science*, 2, 300-321.
- 1985 Sperling, G., van Santen, J. P. H., & Burt, P. J. (1985). Three theories of stroboscopic motion perception. *Spatial Vision*, 1, 47-56.
- 1985 Weichselgartner, E., Sperling, G., & Reeves, A. (1985). Effects of concurrent tasks, distance, and visual obstacles on shifts of visual attention [Abstract]. *Proceedings of the Eastern Psychological Association*, 56, 72.
- 1985 Sperling, G., & Parish, D. H. (1985). Forest-in-the-trees illusions [Abstract]. *Investigative Ophthalmology and Visual Science*, 26(Suppl. 3), 285.
- 1985 Sperling, G., Landy, M., Cohen, Y., & Pavel, M. (1985). Intelligible encoding of ASL image sequences at extremely low information rates. *Computer Vision, Graphics, and Image Processing*, 31, 335-391.
- 1985 Weichselgartner, E., & Sperling, G. (1985). Continuous measurement of visible persistence. *Journal of Experimental Psychology: Human Perception and Performance*, 11, 711-725.
- 1985 Landy, M. S., Doshier, B. A., & Sperling, G. (1985). Assessing kinetic depth in multi-dot displays [Abstract]. *Bulletin of the Psychonomic Society*, 23, 295.
- 1986 Sperling, G. (1986). A signal-to-noise theory of the effects of luminance on picture memory: Comment on Loftus. *Journal of Experimental Psychology: General*, 115, 189-192.
- 1986 Doshier, B. A., Sperling, G., & Wurst, S. A. (1986). Tradeoffs between stereopsis and proximity luminance covariance as determinants of perceived 3D structure. *Vision Research*, 26, 973-990.
- 1986 Reeves, A., & Sperling, G. (1986). Attention gating in short-term visual memory. *Psychological Review*, 93, 180-206.

- 1986 Weichselgartner, E., & Sperling, G. (1986). Two processes in visual attention [Abstract]. *Proceedings of the Eastern Psychological Association*, 57, 38.
- 1986 Sperling, G., & Doshier, B. A. (1986). Strategy and optimization in human information processing. In K. Boff, L. Kaufman, & J. Thomas (Eds.), *Handbook of perception and human performance: Vol. 1. Sensory processes and perception* (Pp. 2-1 to 2-65). New York: Wiley.
- 1986 Weichselgartner, E., & Sperling, G. (1986). Gleichzeitige Erfassung des Zeitverlaufs Zweier Visueller Aufmerksamkeitsprozesse [Abstract]. *Bericht ueber den 35. Kongress der Deutschen Gesellschaft fuer Psychologie in Heidelberg 1986. Band 1. Kurzfassung* (p. 99). Goettingen: Verlag fuer Psychologie,
- Weichselgartner, E., & Sperling, G. (1986). Estimation of the time course of two concurrent attentional processes [Abstract]. In *Proceedings of the 35th Congress of the German Psychological Society in Heidelberg: Vol. 1. Summaries* (p. 99). Goettingen: Verlag fuer Psychologie.
- 1986 Sperling, G., & Weichselgartner, E. (1986). Measuring the time course of automatic and controlled attention [Abstract]. *Bulletin of the Psychonomic Society*, 24, 347.
- 1987 Sperling, G., & Doshier, B. A. (1987). Predicting rigid and nonrigid perceptions [Abstract]. *Investigative Ophthalmology and Visual Science*, 28(Suppl. 3), 362.
- 1987 Landy, M. S., Sperling, G., Doshier, B. A., & Perkins, M. (1987). Structure from what kinds of motion? [Abstract] *Investigative Ophthalmology and Visual Science*, 28(Suppl. 3), 233.
- 1987 Chubb, C., & Sperling, G. (1987). Drift-balanced random stimuli: A general basis for studying non-Fourier motion mechanisms [Abstract]. *Investigative Ophthalmology and Visual Science*, 28(Suppl. 3), 233.
- 1987 Parish, D. H., & Sperling, G. (1987). Object spatial frequency, not retinal spatial frequency, determines identification efficiency [Abstract]. *Investigative Ophthalmology and Visual Science*, 28(Suppl. 3), 359
- 1987 Weichselgartner, E., & Sperling, G. (1987). Dynamics of automatic and controlled visual attention. *Science*, 238, 778-780.
- 1987 Landy, M. S., Sperling, G., Perkins, M. E., & Doshier, B. A. (1987). Perception of complex shape from optic flow [Abstract]. *Journal of the Optical Society of America A: Optics and Image Science*, 4(13), 95.
- 1987 Pavel, M., Sperling, G., Riedl, T. R., & Vanderbeek, A. (1987). Limits of visual communication: The effects of signal-to-noise ratio on the intelligibility of American Sign Language. *Journal of the Optical Society of America A: Optics and Image Science*, 4, 2355-2365.
- 1988 Sperling, G., & Riedl, T. R. (1988). Summation and masking between spatial frequency bands in dynamic natural visual stimuli [Abstract]. *Investigative Ophthalmology and Visual Science*, 29(Suppl. 3), 139.
- 1988 Chubb, C., & Sperling, G. (1988). Processing stages in non-Fourier motion perception [Abstract]. *Investigative Ophthalmology and Visual Science*, 29(Suppl. 3), 266.
- 1988 Sperling, G. (1988). The magical number seven: Information processing then and now. In W. Hirst (Ed.), *The making of cognitive science: Essays in honor of George A. Miller* (pp. 71-80). Cambridge, UK: Cambridge University Press.
- 1988 Riedl, T. R., & Sperling, G. (1988). Spatial-frequency bands in complex visual stimuli: American Sign Language. *Journal of the Optical Society of America A: Optics and Image Science*, 5, 606-616.

- 1988 Chubb, C., & Sperling, G. (1988). Drift-balanced random stimuli: A general basis for studying non-Fourier motion perception. *Journal of the Optical Society of America A: Optics and Image Science*, 5, 1986-2007.
- 1988 Sperling, G., & Gegenfurtner, K. (1988). Two transfer processes in iconic memory [Abstract]. *Bulletin of the Psychonomic Society*, 26, 488.
- 1989 Chubb, C., & Sperling, G. (1989). Second-order motion perception: Space/time separable mechanisms. In *Proceedings: Workshop on Visual Motion. (March 20-22, 1989, Irvine, California)* (pp. 126-138). Washington, DC: IEEE Computer Society Press.
- 1989 Chubb, C., Sperling, G., & Solomon, J. A. (1989). Texture interactions determine apparent lightness [Abstract]. *Investigative Ophthalmology and Visual Science*, 30(Suppl. 8), 1683.
- 1989 Sperling, G., & Chubb, C. (1989). Apparent motion derived from spatial texture [Abstract]. *Investigative Ophthalmology and Visual Science*, 30(Suppl. 3) 425.
- 1989 Chubb, C., & Sperling, G. (1989). Two motion perception mechanisms revealed through distance-driven reversal of apparent motion. *Proceedings of the National Academy of Sciences, USA*, 86, 2985-2989.
- 1989 Doshier, B. A., Landy, M. S., & Sperling, G. (1989). Ratings of kinetic depth in multidot displays. *Journal of Experimental Psychology: Human Perception and Performance*, 15, 816-825.
- 1989 Sperling, G., Landy, M. S., Doshier, B. A., & Perkins, M. E. (1989). Kinetic depth effect and identification of shape. *Journal of Experimental Psychology: Human Perception and Performance*, 15, 426-440.
- 1989 Doshier, B. A., Landy, M. S., & Sperling, G. (1989). Kinetic depth effect and optic flow - I. 3D shape from Fourier motion. *Vision Research*, 29, 1789-1813.
- 1989 Sperling, G. (1989). Three stages and two systems of visual processing. *Spatial Vision*, 4[Prazdny Memorial Issue], 183-207.
- 1989 Chubb, C., Sperling, G., & Solomon, J. A. (1989). Texture interactions determine perceived contrast. *Proceedings of the National Academy of Sciences, USA*, 86, 9631-9635.
- 1990 Sperling, G. (1990). Comparison of perception in the moving and stationary eye. In E. Kowler (Ed.), *Eye movements and their role in visual and cognitive processes* (pp. 307-351). Amsterdam: Elsevier Biomedical Press.
- 1990 Sperling, G., Doshier, B. A., & Landy, M. S. (1990). How to study the kinetic depth experimentally. *Journal of Experimental Psychology: Human Perception and Performance*, 16, 445-450.
- 1990 Parish, D. H., Sperling, G., & Landy, M. S. (1990). Intelligent temporal subsampling of American Sign Language using event boundaries. *Journal of Experimental Psychology: Human Perception and Performance*, 16, 282-294.
- 1990 Farrell, J. E., Pavel, M., & Sperling, G. (1990). The visible persistence of stimuli in stroboscopic motion. *Vision Research*, 30, 921-936.
- 1990 Sutter, A., Sperling, G., & Chubb, C. (1990). Measuring the spatial frequency selectivity of second-order texture mechanisms [Abstract]. *Investigative Ophthalmology and Visual Science*, 31(Suppl. 4), 104.
- 1990 Solomon, J. A., Chubb, C., & Sperling, G. (1990). The lateral inhibition of perceived textural contrast is orientation specific [Abstract]. *Investigative Ophthalmology and Visual Science*, 31(Suppl. 4), 561.



- 1990 Sperling, G., & Weichselgartner, E. (1990). Episodic theory of visual attention [Abstract]. *Bulletin of the Psychonomic Society*, 28, 482.
- 1990 Wurst, S. A., Sperling, G., & Doshier, B. A. (1990). Central locus of short-term visual memory for repetitions [Abstract]. *Bulletin of the Psychonomic Society*, 28, 514-515.
- 1991 Landy, M. S., Doshier, B. A., Sperling, G., & Perkins, M. E. (1991). The kinetic depth effect and optic flow - II. First- and second-order motion. *Vision Research*, 31, 859-876.
- 1991 Parish, D. H., & Sperling, G. (1991). Object spatial frequencies, retinal spatial frequencies, noise, and the efficiency of letter discrimination. *Vision Research*, 31, 1399-1415.
- 1991 Solomon, J. A., & Sperling, G. (1991). Can we see 2nd-order motion and texture in the periphery [Abstract]? *Investigative Ophthalmology and Visual Science*, 32(Suppl. 4), 714.
- 1991 Werkhoven, P., Chubb, C., & Sperling, G. (1991). Texture-defined motion is ruled by an activity metric--not by similarity [Abstract]. *Investigative Ophthalmology and Visual Science*, 32(Suppl. 4), 829.
- 1991 Sutter, A., Sperling, G., & Chubb, C. (1991). Further measurements of the spatial frequency selectivity of second-order texture mechanisms [Abstract]. *Investigative Ophthalmology and Visual Science*, 32(Suppl. 4), 1039.
- 1991 Chubb, C., & Sperling, G. (1991). Texture quilts: Basic tools for studying motion-from-texture. *Journal of Mathematical Psychology*, 35, 411-442.
- 1991 Chubb, C., Solomon, J. A., & Sperling, G. (1991). Contrast contrast determines perceived contrast [Abstract]. *Optical Society of America Annual Meeting Technical Digest*, 17, 164.
- 1991 Sperling, G., & Wurst, S. A. (1991). Selective attention to an item is stored as a feature of the item [Abstract]. *Bulletin of the Psychonomic Society*, 29, 473.
- 1992 Shih, S., & Sperling, G. (1992). Cluster analysis as a tool to discover covert strategies [Abstract]. *Proceedings of the Eastern Psychological Association*, 63, 41.
- 1992 Werkhoven, P., Sperling, G., & Chubb, C. (1992). The dimensionality of motion-from-texture [Abstract]. *Investigative Ophthalmology and Visual Science*, 33(Suppl. 4), 1049.
- 1992 Sperling, G. (1992). Computational models of early vision [Abstract]. *International Journal of Psychology*, 27(3/4), 15.
- 1992 Werkhoven, P., Sperling, G., & Chubb, C. (1992). Energy computations in motion and texture [Abstract]. *Optical Society of America Annual Meeting Technical Digest*, 18, 216.
- 1992 Sperling, G., & Wu, H.-J. (1992). Defining and teaching objectively accurate confidence judgments [Abstract]. In *Program, 33rd Annual Meeting, The Psychonomic Society* (p. 46). Austin, TX: Psychonomic Society, Inc.
- 1992 Sperling, G., Wurst, S. A., & Lu, Z.-L. (1992). Using repetition detection to define and localize the processes of selective attention. In D. E. Meyer & S. Kornblum (Eds.), *Attention and performance XIV: Synergies in experimental psychology, artificial intelligence, and cognitive neuroscience - A silver jubilee* (pp. 265-298). Cambridge, MA: MIT Press.
- 1993 Werkhoven, P., Sperling, G., & Chubb, C. (1993). The dimensionality of texture-defined motion: A single channel theory. *Vision Research*, 33, 463-485.
- 1993 Solomon, J. A., & Sperling, G. (1993). Fullwave and halfwave rectification in motion perception [Abstract]. *Investigative Ophthalmology and Visual Science*, 34(Suppl. 4), 976.

- 1993 Shih, S., & Sperling, G. (1993). Visual search, visual attention, and feature-based stimulus selection [Abstract]. *Investigative Ophthalmology and Visual Science*, 34(Suppl. 4), 1288.
- 1993 Lu, Z.-L., & Sperling, G. (1993). 2nd-order illusions: Mach bands, Craik-O'Brien-Cornsweet [Abstract]. *Investigative Ophthalmology and Visual Science*, 34(Suppl. 4), 1289.
- 1993 Chubb, C., Darcy, J., & Sperling, G. (1993). Metameric matches in the space of textures comprised of small squares with jointly independent intensities [Abstract]. *Investigative Ophthalmology and Visual Science*, 34(Suppl. 4), 1289.
- 1993 Sperling, G. (1993). Spatial, temporal, and featural mechanisms of visual attention [Abstract]. *Spatial Vision*, 7, 86.
- 1993 Gegenfurtner, K., & Sperling, G. (1993). Information transfer in iconic memory experiments. *Journal of Experimental Psychology: Human Perception and Performance*, 19, 845-866.
- 1993 Solomon, J. A., Sperling, G., & Chubb, C. (1993). The lateral inhibition of perceived contrast is indifferent to on-center/off-center segregation, but specific to orientation. *Vision Research*, 33, 2671-2683.
- 1994 Solomon, J. A., & Sperling, G. (1994). Full-wave and half-wave rectification in second-order motion perception. *Vision Research*, 34, 2239-2257.
- 1994 Sperling, G., Chubb, C., Solomon, J. A., & Lu, Z.-L. (1994). Full-wave and half-wave processes in second-order motion and texture. In *Higher-order processing in the visual system* (pp. 287-303. Discussion: pp. 303-308). Chichester, UK: Wiley (Ciba Foundation Symposium, 184).
- 1994 Sperling, G., & Lu, Z.-L. (1994). Immunity to pedestals distinguishes motion-energy from feature-tracking motion-perception mechanisms [Abstract]. *Investigative Ophthalmology and Visual Science*, 35(Suppl. 4), 1390.
- 1994 Sperling, G. (1994). Second-order perception [Abstract]. *Investigative Ophthalmology and Visual Science*, 35(Suppl. 4), 1477.
- 1994 Lu, Z.-L., & Sperling, G. (1994). Deriving the dimensions of texture perception from metameric texture matches [Abstract]. *Investigative Ophthalmology and Visual Science*, 35(Suppl. 4), 2161.
- 1994 Sperling, G., Solomon, J. A., Lu, Z.-L., & Chubb, C. (1994). Visual preprocessing: First- and second-order processes in the perception of motion and texture. In J. M. Zurada, R. J. Marks II, & C. J. Robinson (Eds.), *Computational intelligence: Imitating life* (pp. 223-236). New York: IEEE Press, The Institute of Electrical and Electronics Engineers, Inc.
- 1994 Shih, S., & Sperling, G. (1994). Using cluster analysis to discover and characterize covert strategies. *Psychological Science*, 5, 175-178.
- 1994 Werkhoven, P., Sperling, G., & Chubb, C. (1994). Perception of apparent motion between dissimilar gratings: Spatiotemporal properties. *Vision Research*, 34, 2741-2759.
- 1994 Chubb, C., McGowan, J., Sperling, G., & Werkhoven, P. (1994). Non-Fourier motion analysis. In *Higher-order processing in the visual system* (pp. 193-205. Discussion: Pp. 206-210). Chichester, UK: Wiley (Ciba Foundation Symposium, 184).
- 1994 Sperling, G., & Shih, S. (1994). Mechanisms of feature-based attentional selection in visual search [Abstract]. In *Program, 35th Annual Meeting, The Psychonomic Society* (p. 53). Austin, TX: Psychonomic Society, Inc.
- 1995 Sperling, G., & Doshier, B. A. (1995). Depth from motion. In T. V. Papathomas, C. Chubb, A. Gorea, & E. Kowler (Eds.), *Early vision and beyond* (pp. 133-143). Cambridge, MA: MIT Press.

- 1995 Solomon, J. A., & Sperling, G. (1995). 1st- and 2nd-order motion and texture resolution in central and peripheral vision. *Vision Research*, *35*, 59-64.
- 1995 Sutter, A., Sperling, G., & Chubb, C. (1995). Measuring the spatial frequency selectivity of second-order texture mechanisms. *Vision Research*, *35*, 915-924.
- 1995 Lu, Z.-L., & Sperling, G. (1995). Drastically different saturation for luminance motion versus texture-contrast motion [Abstract]. *Investigative Ophthalmology and Visual Science*, *36*(Suppl. 4), S395.
- 1995 Sperling, G., & Lu, Z.-L. (1995). Attention affects the perceived direction of visual motion [Abstract]. *Investigative Ophthalmology and Visual Science*, *36*(Suppl. 4), S856.
- 1995 Shih, S., & Sperling, G. (1995). A model of selective attention in early visual processing [Abstract]. *Investigative Ophthalmology and Visual Science*, *36*(Suppl. 4), S857.
- 1995 Sperling, G., & Weichselgartner, E. (1995). Episodic theory of the dynamics of spatial attention. *Psychological Review*, *102*, 503-532.
- 1995 Lu, Z.-L., & Sperling, G. (1995). The functional architecture of human visual motion perception. *Vision Research*, *35*, 2697-2722.
- 1995 Lu, Z.-L., & Sperling, G. (1995). Attention-generated apparent motion. *Nature*, *377*, 237-239.
- 1995 Sperling, G., & Lu, Z.-L. (1995). Visual attention operates via a salience map [Abstract]. In *Program, 36th Annual Meeting, The Psychonomic Society* (p. 58). Austin, TX: Psychonomic Society, Inc.
- 1996 Lu, Z.-L., & Sperling, G. (1996). Three systems for visual motion perception. *Current Directions in Psychological Science*, *5*, 44-53.
- 1996 Lu, Z.-L., & Sperling, G. (1996). Second-order illusions: Mach bands, Chevreul, and Craik-O'Brien-Cornsweet. *Vision Research*, *36*, 559-572.
- 1996 Shih, S., & Sperling, G. (1996). Is there feature-based attentional selection in visual search? *Journal of Experimental Psychology: Human Perception and Performance*, *22*, 758-779.
- 1996 Chubb, C., Lu, Z.-L., & Sperling, G. (1996). Algorithm for extracting structure in natural images yields simple cell-like receptive fields [Abstract]. *Investigative Ophthalmology and Visual Science*, *37*(Suppl. 3), S517.
- 1996 Lu, Z.-L., & Sperling, G. (1996). The Lincoln picture non-problem [Abstract]. *Investigative Ophthalmology and Visual Science*, *37*(Suppl. 3), S732.
- 1996 Richman, S., Lu, Z.-L., & Sperling, G. (1996). Flicker motion [Abstract]. *Investigative Ophthalmology and Visual Science*, *37*(Suppl.3), S734.
- 1996 Sperling, G., & Lu, Z.-L. (1996). Second-order reversed-phi reveals two mechanisms: Second-order motion-energy and third-order feature-salience [Abstract]. *Investigative Ophthalmology and Visual Science*, *37*(Suppl. 3), S900.
- 1996 Sperling, G., Lu, Z.-L., & Chubb, C. (1996). First principles of second-order perception. In *1996 SID International Symposium Digest of Technical Papers: Vol. XXVII* (pp. 961-964). Santa Ana, CA: Society for Information Display.
- 1996 Shih, S., & Sperling, G. (1996). The time course of covert visual attention shift [Abstract]. *International Journal of Psychology*, *31*(3/4), 109.

- 1996 Sperling, G. (1996). The mechanism of visual attention is the spatio-temporal salience map [Abstract]. *International Journal of Psychology*, 31(3/4), 258.
- 1996 Sperling, G. (1996). New theories of motion perception [Abstract]. *International Journal of Psychology*, 31(3/4), 362.
- 1996 Sperling, G., & Lu, Z.-L. (1996). The functional architecture of visual motion perception [Abstract]. *International Journal of Psychology*, 31(3/4), 362.
- 1996 Lu, Z.-L., & Sperling, G. (1996). Contrast gain control in first- and second-order motion perception. *Journal of the Optical Society of America A: Optics and Image Science*, 13, 2305-2318.
- 1997 Lu, Z.-L., Sperling, G., & Beck, J. R. (1997). Selective adaptation of three motion systems [Abstract]. *Investigative Ophthalmology and Visual Science*, 38(Suppl. 4), S237.
- 1997 Sperling, G., & Lu, Z.-L. (1997). Proving the independence of first- and second-order motion systems [Abstract]. *Investigative Ophthalmology and Visual Science*, 38(Suppl. 4), S237.
- 1997 Chubb, C., Lu, Z.-L., & Sperling, G. (1997). Statistically certified unsupervised learning [Abstract]. *Investigative Ophthalmology and Visual Science*, 38(Suppl. 4), S257.
- 1997 Blaser, E., Sperling, G., & Lu, Z.-L. (1997). Measuring the spatial resolution of visual attention [Abstract]. *Investigative Ophthalmology and Visual Science*, 38(Suppl. 4), S687.
- 1997 Sperling, G. (1997). The goal of theory in experimental psychology. In R. L. Solso (Ed.), *Mind and brain sciences in the 21st century* (pp. 253-264). Cambridge, MA: MIT Press.
- 1997 Chubb, C., Lu, Z.-L., & Sperling, G. (1997). Structure detection: A statistically certified unsupervised learning procedure. *Vision Research (Special Issue: The Vision of Natural and Complex Images)*, 37, 3343-3365.
- 1997 Sperling, G., & Shih, S. (1997). Measuring and modeling selective attention in early visual processing [Abstract]. *Abstracts of the Psychonomic Society*, 2, 18.
- 1998 Sperling, G., & Lu, Z.-L. (1998). A systems analysis of visual motion perception. In T. Watanabe (Ed.), *High-level motion processing* (pp. 153-183). Cambridge, MA: MIT Press.
- 1998 Sperling, G. (1998). The economics of attention [Abstract]. *Mathematical Social Sciences*, 35, 75-76.
- 1998 Doshier, B. A., & Sperling, G. (1998). A century of human information-processing theory: Vision, attention, and memory. In J. Hochberg (Ed.), *Perception and cognition at century's end* (pp. 199-252). New York: Academic Press.
- 1998 Blaser, E., & Sperling, G. (1998). Measuring attention to color using an equivalent chromaticity paradigm [Abstract]. *Investigative Ophthalmology and Visual Science*, 39(Suppl. 4), S873.
- 1998 Sperling, G., & Lu, Z.-L. (1998). Update on the three-motion-systems theory [Abstract]. *Investigative Ophthalmology and Visual Science*, 39(Suppl. 4), S461.
- 1998 Richman, S. N., & Sperling, G. (1998). Perception of line-segment textures [Abstract]. *Investigative Ophthalmology and Visual Science*, 39(Suppl. 4), S857.
- 1998 Sperling, G. (1998). First-order, second-order, and third-order motion systems [Abstract]. *Perception*, 27(Suppl.), 3.
- 1998 Sperling, G., & Shih, S. (1998). A mathematical theory of iconic memory and attention [Abstract]. *Journal of Mathematical Psychology*, 42, 507-8.

- 1998 Sperling, G., & Blaser, E. (1998). Measuring the amplification factor of attention to color [Abstract]. *Abstracts of the Psychonomic Society*, 2, 24.
- 1999 Lu, Z.-L., & Sperling, G. (1999). Second-order reversed phi. *Perception and Psychophysics*, 61, 1075-1088.
- 1999 Lu, Z.-L., Lesmes, L. A., & Sperling, G. (1999). The mechanism of isoluminant chromatic motion perception. *Proceedings of the National Academy of Sciences, USA*, 96, 8289-8294.
- 1999 Lesmes, L. A., Lu, Z.-L., & Sperling, G. (1999). The mechanism of isoluminant motion perception is third-order motion [Abstract]. *Investigative Ophthalmology and Visual Science*, 40(Suppl. 4), S190.
- 1999 Lu, Z.-L., & Sperling, G. (1999). The amplification principle in motion perception [Abstract]. *Investigative Ophthalmology and Visual Science*, 40(Suppl. 4), S199.
- 1999 Sperling, G., & Lu, Z.-L. (1999). Unequal representation of black and white in human vision [Abstract]. *Investigative Ophthalmology and Visual Science*, 40(Suppl. 4), S200.
- 1999 Chubb, C., Lu, Z.-L., & Sperling, G. (1999). Measuring the nonlinearity used to sense high temporal frequency second order motion [Abstract]. *Investigative Ophthalmology and Visual Science*, 40(Suppl. 4), S424.
- 1999 Ho, C. E., & Sperling, G. (1999). Selecting second- and third-order motion pathways [Abstract]. *Investigative Ophthalmology and Visual Science*, 40(Suppl. 4), S425.
- 1999 Lu, Z.-L., Lesmes, L. A., & Sperling, G. (1999). Isoluminant chromatic motion perception: Defining the mechanism [Abstract]. *Perception*, 28(Suppl.), 28.
- 1999 Sperling, G., Blaser, E., & Lu, Z.-L. (1999). The perceptual amplification of attention to color [Abstract]. *Perception*, 28(Suppl.), 57.
- 1999 Blaser, E., Sperling, G., & Lu, Z.-L. (1999). Measuring the amplification of attention. *Proceedings of the National Academy of Sciences, USA*, 96, 11681-11686.
- 1999 Sperling, G., & Ho, C. E. (1999). Attention and other determinants of perceived direction in ambiguous stimuli [Abstract]. *Abstracts of the Psychonomic Society*, 4, 18.
- 1999 Sperling, G. (1999). Computational models of attention switching. *Abstracts of the Psychonomic Society*, 4, 30. [Abstract]
- 1999 Lu, Z.-L., Lesmes, L. A., & Sperling, G. (1999). Perceptual motion standstill in rapidly moving chromatic displays. *Proceedings of the National Academy of Sciences, USA*, 96, 15374-15379.
- 2000 Tseng, C.-h., Gobell, J. L., & Sperling, G. (2000). Sensitization to color: Induced by search, measured by motion. *Investigative Ophthalmology and Visual Science*, 41(Suppl. 4), S40. [Abstract]
- 2000 Tse, C.-H., Lu, Z.-L., & Sperling, G. (2000). Attending to red and green concurrently in different areas reduces attentional capacity. *Investigative Ophthalmology and Visual Science*, 41(Suppl. 4), S42. [Abstract]
- 2000 Sperling, G., Kim, T.-S., & Lu, Z.-L. (2000). Direction-reversal VEPs reveal signatures of first- and second-order motion. *Investigative Ophthalmology and Visual Science*, 41(Suppl. 4), S948. [Abstract]
- 2000 Lesmes, L. A., Lu, Z.-L., & Sperling, G. (2000). Motion standstill in rapidly moving chromatic displays. *Investigative Ophthalmology and Visual Science*, 41(Suppl. 4), S796. [Abstract]

- 2000 Gobell, J. L., Tseng, C.-h., & Sperling, G. (2000). Effect of scene orientation on depth perception: Trapezoids, windsurfers, runways. *Investigative Ophthalmology and Visual Science*, 41(Suppl. 4), S948. [Abstract]
- 2000 Sperling, G., & Ho, C. E. (2000). Third-order versus first-order and second-order motion in ambiguous stimuli: Competition reveals temporal tuning functions, monocular/binocular, and the role of attention. *Perception*, 29(Suppl.), 83. [Abstract]
- 2000 Lu, Z.-L., Lesmes, L. A., & Sperling, G. (2000). Motion standstill perceived from rapidly moving red-green gratings. *Perception*, 29(Suppl.), 83. [Abstract]
- 2000 Sperling, G., & Lu, Z.-L. (2000). The current status of the three-systems theory of visual motion perception. *Conference Program: Optics for the New Millennium. OSA Annual Meeting and Exhibit 2000*, Washington, DC: Optical Society of America. (p. 52). [Abstract]
- 2001 Sperling, G., Reeves, A., Blaser, E., Lu, Z.-L., & Weichselgartner, E. (2001). Two computational models of attention. In J. Braun, C. Koch, & J. L. Davis (Eds.), *Visual attention and cortical circuits* (pp. 177-214 + four color plates). Cambridge, MA: MIT Press.
- 2001 Appelbaum, L. G., Lu, Z.-L., & Sperling, G. (2001). Contrast amplification in a texture discrimination task. *Investigative Ophthalmology and Visual Science*, 42(Suppl. 4), S315. [Abstract]
- 2001 Tseng, C.-h., Kim, H., Gobell, J. L., Lu, Z.-L., & Sperling, G. (2001). Motion standstill in rapidly moving stereoptic depth displays. *Investigative Ophthalmology and Visual Science*, 42(Suppl. 4), S504. [Abstract]
- 2001 Sperling, G., Kim, H., & Lu, Z.-L. (2001). Is there interocular first-order motion? *Investigative Ophthalmology and Visual Science*, 42(Suppl. 4), S532. [Abstract]
- 2001 Kim, H., Lu, Z.-L., & Sperling, G. (2001). Rivalry motion versus depth motion. *Investigative Ophthalmology and Visual Science*, 42(Suppl. 4), S736. [Abstract]
- 2001 Gobell, J. L., Tseng, C.-h., & Sperling, G. (2001). Characterizing the constraints on the spatial distribution of visual attention. *Investigative Ophthalmology and Visual Science*, 42(Suppl. 4), S944. [Abstract]
- 2001 Lesmes, L. A., Lu, Z.-L., Doshier, B., Sperling, G., & Posner, C. (2001). Intra- and cross-modal activation of attention gates. *Investigative Ophthalmology and Visual Science*, 42(Suppl. 4), S945. [Abstract]
- 2001 Lu, Z.-L., & Sperling, G. (2001). Sensitive calibration and measurement procedures based on the amplification principle in motion perception. *Vision Research*, 41, 2355-2374.
- 2001 Tseng, C.-h., & Sperling, G. (2001). Sensitization to color: Induced by instructions, measured by motion. In *Proceedings of the Third International Conference on Cognitive Science* (pp. 286-287). Beijing: Press of the University of Science and Technology of China. [Abstract]
- 2001 Lu, Z.-L., & Sperling, G. (2001). Three-systems theory of human visual motion perception: Review and update. *Journal of the Optical Society of America A: Optics and Image Science*, 18, 2331-2370.
- 2001 Appelbaum, L. G., Lu, Z.-L., & Sperling, G. (2001). Facilitation of subthreshold contrasts by means of texture-slant discrimination. *Optics Express*, 9(8), FV1, 7. [Abstract]
- 2001 Gobell, J., Tseng, C.-h., & Sperling, G. (2001). Measuring the spatial resolution of visual attention. *Optics Express*, 9(8), FV4, 8. [Abstract]

- 2001 Kim, H., Lu, Z.-L., & Sperling, G. (2001). Rivalry motion: A cue to cyclopean motion perception. *Optics Express*, 9(8), FV5, 8. [Abstract]
- 2001 Tseng, C.-h., Kim, H., Gobell, J. L., Lu, Z.-L., & Sperling, G. (2001). Revisiting stereoptic motion standstill: Stereoptic motion processing has lower temporal resolution than shape processing. *Optics Express*, 9(8), FV13, 10. [Abstract]
- 2001 Sperling, G. (2001). Motion perception models. In N. J. Smelser & P. B. Baltes (Eds.), *2001 International Encyclopedia of the Social and Behavior Sciences* (pp. 10093-10099). Oxford, UK: Pergamon Press.
- 2002 Shih, S., & Sperling, G. (2002). Measuring and modeling the trajectory of visual spatial attention. *Psychological Review*, 109, 260-305.
- 2002 Gobell, J., Tseng, C.-h., & Sperling, G. (2002). Two variations of a novel search task to investigate the nature and limits of the distribution of visual attention. *Journal of Vision*, 2(7), 736a. [Abstract]
- 2002 Ding, J., & Sperling, G. (2002). A gain-control theory of binocular combination. *Journal of Vision*, 2(7), 327a. [Abstract]
- 2002 Sperling, G., Lyu, S., & Kim, H. (2002). Motion standstill in first- and second-order motion. *Journal of Vision*, 2(7), 256a. [Abstract]
- 2002 Lu, Z.-L., Lesmes, L. A., & Sperling, G. (2002). Equiluminance, sensitive calibration, three-systems theory, and equiluminous chromatic motion perception. *Perception*, 31(Suppl.), 13. [Abstract]
- 2002 Sperling, G., Lyu, S.-H., & Kim, H. (2002). Apparent standstill of rapidly moving first-order and second-order motion stimuli. *Perception*, 31(Suppl.), 100. [Abstract]
- 2002 Tseng, C.-h., Kim, H., Gobell, J. L., Lu, Z.-L., & Sperling, G. (2002). Stereoscopic motion standstill: Phenomenon and theory. *Perception*, 31(Suppl.), 150. [Abstract]
- 2002 Lu, Z.-L., & Sperling, G. (2002). Stereomotion is processed by the third-order motion system: Reply to comment on "Three systems theory of human visual motion perception: review and update." *Journal of the Optical Society of America A: Optics and Image Science*, 19, 2144-2153.
- 2003 Sperling, G., & Ding, J. (2003). A neurally based computational theory of binocular combination. *Perception*, 32(Suppl.), 14. [Abstract]
- 2003 Gobell, J., Tseng, C.-h., & Sperling, G. (2003). Toward a general model of the spatial distribution of visual attention [Abstract]. *Perception*, 32(Suppl.), 45.
- 2003 Gobell, J., Srinivasan, R., & Sperling, G. (2003). Using 'frequency-tagged' EEG to measure the spatial resolution of attention [Abstract]. Presented at the 9th International Conference on Functional Mapping of the Human Brain, June 19-22, 2003, New York, NY. Available on CD-Rom in *NeuroImage*, 19(2).
- 2003 Sperling, G., Wurst, S., & Lu, Z.-L. (2003). Quantifying the efficiency of visual attentional selection. *Abstracts of the Psychonomic Society*, 8, 76. [Abstract]
- 2003 Lu, Z.-L., & Sperling, G. (2003). Measuring sensory memory: Magnetoencephalography habituation and psychophysics. In Z.-L. Lu & L. Kaufman (Eds.), *Magnetic source imaging of the human brain* (pp. 319-342). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- 2003 Gobell, J., Tseng, C.-h., & Sperling, G. (2003). Investigating the spatial modulation transfer function of attention - distinguishing between effects of false target crowding and spatial frequency. *Journal of Vision*, 3(9), 569a. [Abstract]

- 2003 Tseng, C.-h., Gobell, J. L., & Sperling, G. (2003). Attentional sensitization to specific colors. *Journal of Vision*, 3(9), 869a. [Abstract]
- 2003 Lesmes, L. A., Lu, Z.-L., Doshier, B. A., & Sperling, G. (2003). Comparing the temporal dynamics of intra- and cross-modal attention switching [Abstract]. *Journal of Vision*, 3(9), 180a.
- 2004 Gobell, J. L., Tseng, C.-h., & Sperling, G. (2004). The spatial distribution of visual attention. *Vision Research*, 19, 1273-1296.
- 2004 Tseng, C.-h., Gobell, J. L., & Sperling, G. (2004). Long-lasting sensitization to a given colour after visual search. *Nature*, 428, 657-660.
- 2004 Chubb, C., Landy, M., Nam, J.-H., Bindman, D. R., & Sperling, G. (2004). The three dimensions for encoding contrast in simple textures. *Journal of Vision*, 4(8), 713a. [Abstract]
- 2004 Sperling, G., & Hsu, A. (2004). Revisiting the Lincoln picture problem. *Journal of Vision*, 4(8), 53a. [Abstract]
- 2004 Sperling, G., Wurst, S. A., & Lu, Z.-L. (2004). Measuring the efficiency of attentional filtering. *Perception*, 33(Suppl.), 5. [Abstract]
- 2004 Sperling, G., Gobell, J., & Tseng, C.-h. (2004). Random-dot stereograms, dipoles, and motion standstill. *Perception*, 33(Suppl.), 29-30. [Abstract]
- 2004 Tseng, C.-h., Gobell, J., & Sperling, G. (2004). Movement of isoluminant red - green gratings and of random-dot stereo depth gratings is perceived by the same salience motion-perception mechanism. *Perception*, 33(Suppl.), 154. [Abstract]
- 2005 Tseng, C.-h., Vidnyanszky, Z., Papathomas, T., & Sperling, G. (2005). Attention-based long-lasting sensitization and suppression of colors. *Journal of Vision*, 5(8), 234a. [Abstract]
- 2005 Appelbaum, L. G., Lu, Z.-L., & Sperling, G. (2005). Neuromagnetic responses to first- and second-order motion. *Journal of Vision*, 5(8), 926a. [Abstract]
- 2005 Sperling, G., Appelbaum, L. G., & Lu, Z.-L. (2005). Amplifying the effective perceptual contrast of a grating. *Perception*, 34(Suppl.), 22. [Abstract]
- 2006 Ding, J., & Sperling, G. (2006). A gain-control theory of binocular combination. *Proceedings of the National Academy of Sciences, USA*, 103, 1141-1146.
- 2006 Lin, L., & Sperling, G. (2006). Visual short-term memory and context memory for grating contrast. *Journal of Vision*, 6(6), 24. [Abstract] [Abstract]
- 2006 Wong-Drew, S. A., Chubb, C. F., & Sperling, G. (2006). Attentional filtering of dot intensities in centroid estimations. *Journal of Vision*, 6(6), 222. [Abstract]
- 2006 Hsu, A., Scofield, I., & Sperling, G. (2006). A computational model for the distribution of spatial attention. *Journal of Vision*, 6(6), 507. [Abstract]
- 2006 Scofield, I., Hsu, A., & Sperling, G. (2006). Complex spatial distributions of attention. *Journal of Vision*, 6(6), 508. [Abstract]
- 2006 Ding, J., Srinivasan, R., & Sperling, G. (2006). Flicker elicits eeg responses in two distinct cortical networks depending on attention and flicker frequency. *Journal of Vision*, 6(6), 515. [Abstract]
- 2006 Sperling, G., & Ding, J. (2006). An early gain-control mechanism in binocular combination. *Journal of Vision*, 6(6), 832. [Abstract]



- 2006 Liu, D., & Sperling, G. (2006). Motion strength is not what is summed in the vector summation computation of plaid motion. *Journal of Vision*, 6(6), 1046. [Abstract]
- 2006 Tseng, C.-h., & Sperling, G. (2006). Two distinct attentional mechanisms revealed by the third-order motion paradigm. *Perception*, 35(Suppl.), 20. [Abstract]
- 2006 Ding, J., Sperling, G., & Srinivasan, R. (2006). Attentional modulation of SSVEP power depends on the network tagged by the flicker frequency. *Cerebral Cortex*, 16, 1016-1029.
- 2006 Tseng, C.-h., Gobell, J. L., Lu, Z.-L., & Sperling, G. (2006). When motion appears stopped: Stereo motion standstill. *Proceedings of the National Academy of Sciences, USA*, 103, 14953-14958.
- 2007 Ding, J., & Sperling, G. (2007). Binocular combination: Measurements and a model. In L. Harris & M. Jenkin (Eds.), *Computational vision in neural and machine systems*. Cambridge, UK: Cambridge University Press. Pp. 257-305.
- 2007 Appelbaum, L. G., Lu, Z.-L., & Sperling, G. (2007). Contrast amplification in global texture orientation discrimination. *Journal of Vision*, 7(10), 1-19.
- 2007 Sperling, G., Scofield, I., & Hsu, A. (2007). A general computational theory of the distribution of visual spatial attention. *Perception*, 36(Suppl.), 115. [Abstract]
- 2007 Chubb, C., Nam, J.-H., Bindman, D. R., & Sperling, G. (2007). The three dimensions of human visual sensitivity to first-order contrast statistics. *Vision Research*, 47, 2237-2248
- 2008 Blaser, E., & Sperling, G. (2008). When is motion 'motion'? *Perception*, 37, 624-627.
- 2008 Liu, D., & Sperling, G. (2008). The perceived motion direction of fast-moving Type-II plaids. *Journal of Vision*, 8(6), 19. [Abstract]
- 2008 Lin, L., & Sperling, G. (2008). No iconic memory decay nor visual short-term memory decay for grating contrast. *Journal of Vision*, 8(6), 206. [Abstract]
- 2008 Rubin, T. N., Chubb, C. F., Wright, C. E., Wong, S. A., & Sperling, G. (2008). Spatiotemporal dynamics of the perception of dot displays. *Journal of Vision*, 8(6), 282. [Abstract]
- 2008 Scofield, I., Chubb, C., & Sperling, G. (2008). Analyzing band-selective preattentive texture mechanisms. *Journal of Vision*, 8(6), 352. [Abstract]
- 2008 Sperling, G., Scofield, I., & Hsu, A. (2008). Computational model of the spatial resolution of visual attention. *Journal of Vision*, 8(6), 396. [Abstract]
- 2008 Drew, S. A., Chubb, C. F., Ehrlich, T., Rubin, T., & Sperling, G. (2008). Binary versus graded filters for selectively attending to dots of different contrasts. *Journal of Vision*, 8(6), 881. [Abstract]
- 2009 Drew, S., Chubb, C., & Sperling, G. (2009). Quantifying attention: Attention filtering in centroid estimations. *Journal of Vision*, 9(8), 229. [Abstract]
- 2009 Sperling, G., Gobell, J., & Tseng, C.-h. (2009). Trapezoidal illusions: Windsufers versus runways. *Journal of Vision*, 9(8), 691. [Abstract]
- 2009 Sperling, G., & Liu, D. T. (2009). The vector sum of motion strengths describes the perceived motion direction of first-order plaids. *Perception*, 38(Suppl.), 57. [Abstract]
- 2010 Sperling, G. (2010) Symposium Summary. Six different subareas of attention. *Journal of Vision* August 2010, Vol.10, 8. doi:10.1167/10.7.8 [Abstract]

- 2010 Tseng, C.-h., Vidnyanszky, Z., Pappathomas, T., & Sperling, G. (2010). Attention-based long-lasting sensitization and suppression of colors. *Vision Research*, 50(4), 416-423.
- 2010 Sperling, G. (2010). Modeling the temporal, spatial, and featural processes of visual attention. *Journal of Vision*, 10(7),14,14a. [Abstract]
- 2010 Sperling, G. (2010). Ocular and image components in binocular rivalry: Measuring their strengths and decay rates. *Journal of Vision*, 10(7), 353. [Abstract]
- 2010 Drew, S. A., Chubb, C. F., & Sperling, G. (2010). Precise attention filters for Weber contrast derived from centroid estimations. *Journal of Vision*, 10(10):20, 1-16.
- 2010 Sperling, G., Drew, S. A., & Chubb, C. (2010). Measuring the filters for selective attention. *Perception*, 39(Suppl.), 5. [Abstract]
- 2010 Sperling, G. (2010). Motion perception psychophysics: Yesterday, Today, Tomorrow. *Perception*, 39(Suppl.), 113. [Abstract]
- 2011 Sperling, G., & Lyu, S.-H. (2011). Motion standstill in luminance-modulated and texture-contrast-modulated gratings. *Journal of Vision*, 11(11), 753. [Abstract]
- 2011 Lyu, S.-H., Lu, Z.-L., & Sperling, G. (2011). Cortical areas involved in processing planar stereo motion. *Journal of Vision*, 11(11), 336. [Abstract]
- 2011 Sperling, G., Scofield, I., & Hsu, A. (2011). Measuring the spatial resolution and cognitive capacity of visual selective attention. *Perception*, 40(Suppl.), 47. [Abstract]
- 2011 Sperling, G. (2011). Measuring the perceptual strengths of visible and invisible stimuli. *Journal of Vision*, 11(15), 77. [Abstract]
- 2012 Chubb, C., Sun, P., & Sperling, G. (2012). The perceived motion of moving barber poles. *Journal of Vision*, 12(9), 772. [Abstract]
- 2012 Sun, P., Chubb, C., & Sperling, G. A paradoxical peripheral plaid motion phenomenon. *Journal of Vision*, 12(9), 1233. [Abstract]
- 2012 Sperling, G., Sun, P., & Chubb, C. (2012). Perceived motion of moving barber pole arrays is determined by a streaming process. *Perception*, 41(Suppl.), 23. [Abstract]
- 2012 Sperling, G., Sun, P., & Chubb, C. (2012). A peripherally viewed barber pole illusion reveals a new motion-perception mechanism [Abstract]. *Abstracts of the Psychonomic Society*, 17, 13. [Abstract]
- 2012 Krishnan, L., Kang, A., Sperling, G., & Srinivasan, R. (2012). Neural strategies for selective attention distinguish fast-action video game players. *Brain Topography*, DOI 10.1007/s10548-012-0232-3. 16pp.
- 2012 Lu, Z.-L., & Sperling, G. (2012). Black-White asymmetry in visual perception. *Journal of Vision*, 12(10):8, 1-21. doi:10.1167/12.10.8
- 2012 Chubb C, Scofield I, Chiao C-C, & Sperling, G. (2012). A method for analyzing the dimensions of preattentive visual sensitivity. *Journal of Mathematical Psychology*, 56(6), 427-443.
- 2013 Yang, H., Sun, P., Chubb, C., & Sperling, G. (2013). Complex attention filters for dot contrast derived from a centroid judgment task. *Journal of Vision*, 13(9), 430. [Abstract]
- 2013 Sperling, G., Sun, P., & Chubb, C. (2013). The perceived motion of three varieties of moving barberpole stimuli. *Journal of Vision*, 13(9), 767. [Abstract]

- 2013 Herrera, C., Sun, P., Groulx, K., Wright, C., Chubb, C., & Sperling, G. (2013). How do the S-, M- and L-cones contribute to motion luminance assessed using minimum motion? *Journal of Vision*, *13*(9), 1021. [Abstract]
- 2013 Sun, P., Herrera, C., Chubb, C., Wright, C., & Sperling, G. (2013). Attention filters for colors: Isolating single colors. *Journal of Vision*, *13*(9), 1162. [Abstract]
- 2013 Sperling, G., Sun, P., Wright, C. E. & Chubb, C. (2013). An automatic, bottom-up process segregates homogeneous elements from similar but different elements in a brief visual display, *Perception*, *42*(Suppl.), 15. [Abstract]
- 2013 Sperling, G. Measuring the time course of the information available in brief visual presentations. *Journal of Vision*, *13*(15), T22. [Abstract] doi: 10.1167/13.15.22
- 2014 Sperling, G, and Hsu, A. (2014). Deriving the acuity and the capacity of visual spatial attention. *Journal of Vision*. *14*(10), 521. [Abstract] doi: 10.1167/14.10.521
- 2014 Sun, P., Chubb, C., & Sperling, G. (2014). A moving-barber-pole illusion. *Journal of Vision*, *14*(5):1, 1-27.
- 2015 Sun, P., Chubb, C., & Sperling, G. (2015). Two mechanisms that determine the Barber-Pole Illusion. *Vision Research*, 111A, 43-54.
- 2015 Tseng, C-H, Gobell, J. L., Sperling, G. (2015). Factors that determine depth perception of trapezoids, windsurfers, runways. *Frontiers in Human Neuroscience*, 9(182), 1-14. doi: 10.3389/fnhum.2015.00182.
- 2015 Inverso, M., Sun, P., Chubb, C., Wright, C., & Sperling, G. (2015). Evidence against global attention filters selective for absolute bar-orientation in human vision. *Journal of Vision* *15*(12):924. [Abstract] DOI:10.1167/15.12.924.
- 2015 Blair, G., Wright, C., Chubb, C., Sun, P., & Sperling, G. (2015). Disc size supports top-down, selective attention in a task requiring integration across multiple targets. *Journal of Vision* *15*(12):897. [Abstract] DOI:10.1167/15.12.897.
- 2015 Sun, P., Turbow, B., Chubb, C., Wright, C., & Sperling, G. (2015). Evidence for the role of feature-based-attention at a very early processing stage. *Journal of Vision* *15*(12):889. [Abstract] DOI:10.1167/15.12.889.
- 2015 Blair, G., Winter, N. A., Wright, C. E., Chubb, C., & Sperling, G. (2015) Color-size conjunction stimuli support feature-based selection for centroid judgments. *Abstracts of the Psychonomic Society*, *20*, 34. [Abstract]
- 2016 Yang, H. J., Sun, P., Chubb, C., and Sperling, G. (2016). Complex attention filters for low contrast items. *Journal of Vision*. *16*(12) 681. [Abstract] doi: 10.1167/16.12.681
- 2016 Winter, A. N., Wright, C. E., Chubb, C., and Sperling, G. (2016). Conjunctive targets are hard in visual search but easy in centroid judgments. *Journal of Vision*, *16*(12), 750. [Abstract] doi: 10.1167/16.12.750
- 2016 Inverso, M., Chubb, C., Wright, C. E., Shiffrin, R., and Sperling, G. (2016). Comparing efficiencies in estimating centroids and judging numerosity. *Journal of Vision*, *12*(12), 750. [Abstract] doi: 10.1167/16.12.750
- 2016 Sun, R., Chubb, C., Wright, C. E., Sperling, G. (2016). The centroid paradigm: Quantifying feature-based attention in terms of attention filters. *Attention, Perception, and Psychophysics*, *78*(2), 474-515. DOI 10.3758/s13414-015-0978-2

- 2016 Inverso, M., Sun, P., Chubb, C., Wright, C., & Sperling, G. (2016). Evidence against global attention filters selective for absolute bar-orientation in human vision. *Attention, Perception, and Psychophysics*, 77, 293-308. DOI 10.3758/s13414-015-1005-3.
- 2016 Sun, R., Chubb, C., Wright, C. E., Sperling, G. (2016). Human attention filters for single colors. *Proceedings of the National Academy of Sciences, USA*, 113(43), 1-9, E6712-E6720. Published online October 10, 2016 [www.pnas.org/dgi/doi/10.1073/pnas.1614062113](http://www.pnas.org/dgi/doi/10.1073/pnas.1614062113)
- 2016 \*Sperling, G., Chu, V., and Sun, P. (2016). Multiple salience maps? *Abstracts of the Psychonomic Society*, 21, 34. [Abstract]
- 2016 Winter, A. N., Chubb, C., Wright, C. E., and Sperling, G. (2016). Target-distractor similarity in feature and conjunctive centroid judgments. *Abstracts of the Psychonomic Society*, 21, 211. [Abstract]
- 2017 Chubb, C. Solomon, J.A., & Sperling, G. (2017). The contrast-contrast illusion. In Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.
- 2017 Chubb, C., Darcy, J., Landy, M. S., Econopouly, J., Nam, J-H, Bindman, D., & Sperling, G. (2017). The Scramble Illusion: Texture Metamers. Chapter 96 in Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.
- 2017 Lu, Z-L., & Sperling, G. (2017). Attention-generated apparent motion. Chapter 72 in Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.
- 2017 Lu, Z-L., & Sperling, G. (2017). Second-order Reversed Phi. Chapter 71 in Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.
- 2017 Sperling, G. & Lu, Z-L. (2017). Objectless Motion: The Pedestalled Motion Paradigm. Chapter 79 in Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.
- 2017 Sperling, G., Lyu, S-H., Tseng, C-H., & Lu, Z-L. (2017). The Motion Standstill Illusion. Chapter 78 in Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.
- 2017 Lu, Z-L., & Sperling, G. (2017). Second-order Mach Bands, Chevreul, and Craik-O'Brien-Cornsweet Illusions. Chapter 53 in Shapiro, A. & Tedorovic, D. (Eds). *The Oxford Compendium of Visual Illusions*. Oxford University Press, Oxford, UK.

## Reprintings of Publications

(A partial list of books in which the articles, whose journal references were given above, have been reprinted. Not up to date.)

\* Indicates the entire volume of the journal was reprinted.

### The information available in brief visual presentations (1960).

1. *Inzhenernaya Psikhologiya za Rubezhom (Engineering Psychology Abroad)*. A. N. Leontiev (Ed.). Moskva: Izdatelstvo Progress (Progress publishers), 1967. Pp. 7-68 (translated into Russian).
2. *The International Library of Critical Writings in Psychology. Memory*. Morris, P. E. and Conway, M. (eds). Cheltenham, Gloster, & London, UK: Edward Elgar, 1992.

### Short-term storage of information in vision (1961).

1. *Contemporary Theory and Research in Visual Perception*. R. N. Haber (Ed.). New York: Holt, Rinehart and Winston, Inc., 1968. Pp. 202-214.

### A model for visual memory tasks (1963).

1. Bell System Technical Monograph, 4534.
2. *Inzhenernaya Psikhologiya za Rubezhom (Engineering Psychology Abroad)*. A. N. Leontiev (Ed.). Moskva: Izdatelstvo Progress (Progress publishers), 1967. Pp. 69-94 (translated into Russian).
3. *Bobbs-Merrill Reprint Series in Psychology*, The Bobbs-Merrill Co., 4300 West 62nd Street, Indianapolis, Indiana. Reprint No. P-697.
4. *Information-Processing Approaches to Visual Perception*. R. N. Haber (Ed.). New York: Holt, Rinehart and Winston, Inc., 1968. Pp. 18-31.
5. *Introductory Psychology. Selected Readings*. Vol. I (Second Edition). David E. Carter (Ed.). New York: MSS Educational Publishing Co., Inc., 1970.
6. *Engineering Psychology. Current Perspectives in Research*. William C. Howell and Irwin L. Goldstein (Eds.). New York: Appleton-Century-Crofts (Meredith Corp.), 1971. Pp. 102-116.
7. *Readings in the Psychology of Cognition*. M. Coltheart (Ed.). Toronto, Canada: Holt, Rinehart and Winston, Inc., 1972. Pp. 27-44.
8. *Best of Human Factors*. Nancy J. Cooke and Eduardo Salas (Eds). Human Factors Society, 2008.

### Linear theory and the psychophysics of flicker (1964).

1. *\*Flicker*. H. E. Henkes and L. H. van der Tweel (Eds.). The Hague: W. Junk, 1964. Pp. 3-15.

**Successive approximations to a model for short-term memory (1967).**

1. *Pamyat i Deyatelnost, Simposium 22 (Memory and Action, Symposium 22)*. P. I. Zinchenko (Ed.). Moskva: Izdatelstvo Nauka (Science Publishers), 1966. Pp. 26-40.
2. *\*Attention and Performance*. A. F. Sanders (Ed.). Amsterdam: North-Holland Publishing Co., 1967. Pp. 285-292. (Also available in paperback.)
3. *Memory and Attention. An Introduction to Human Information Processing*. D. A. Norman. New York: John Wiley & Sons, Inc. Pp. 63-68. (Norman quotes most of the article but omits three sections: Introduction, Short Duration Visual Images, and Summary.)
- 3a. Translated into Italian by Franco Angeli Editori, Milan, Italy, 1970.
4. *Information-Processing Approaches to Visual Perception*. R. N. Haber (Ed.). New York: Holt, Rinehart and Winston, Inc. 1968. Pp. 32-37.
5. *Readings in the Psychology of Cognition*. M. Coltheart (Ed.). Toronto, Canada: Holt, Rinehart and Winston, Inc., 1972. Pp. 45-52.
6. *Psicologia Cognivista*. Roncato and Umilta (Eds.). Bologna, Italy: Societa Editrice il Mulino, 1980.

**Computer Papers**

1. *On Line Computing for Psychology*. Advanced Study Institute, NATO, July 1969. Parasites, 106-107; Calibration, 58-62; Flicker, 63-69; Stereo, 70-79.

**Sperling/Landy/Cohen/Pavel, Intelligible encoding of ASL image sequences at extremely low information rates.**

1. In: *Human and Machine Vision II, Azriel Rosenfeld, Ed.*, Perspectives in Computing, Vol. 13. New York: Academic Press, 1986, Pp. 256-312.

**Lu, Z.-L., Lesmes, L. A., & Sperling, G. (2009). Mechanisms of isoluminant chromatic motion perception.**

1. In: *Vision Science*, Z.-L. Lu, Y. Zhou, S. He & Z. He (Eds.). University of Science and Technology of China Press, Herfei, China, Pp. 422-438.

## Bell Labs Technical Memoranda

- 1968 Sperling, G. *GSDumps. A General Purpose Subroutine for Storing Information on Magnetic Tapes for the DDP24 Computer.* Bell Telephone Laboratories Memorandum May 16, 1968 (12 pages).
- 1969 Budiansky, Judy, and Sperling, George. *GSLetters. A General Purpose System for Producing Visual Displays in Real Time and for Running Psychological Experiments on the DDP24 Computer.* Bell Telephone Laboratories Technical Memorandum 69-1223-6, March 18, 1969. (159 pages).
- 1969 Sperling, G. *GSRprints: A Program for Managing Mailing Lists with the DDP224 Computer.* Bell Telephone Laboratories Technical Memorandum 69-1223-4, March 25, 1969 (27 pages).
- 1972 Sperling, G., Dwivedi, A. S., and Kaplan, Miriam. *NYUSHO User Manual. NYUSHO. A General Purpose Language for Producing Visual Displays in Real Time and For Running Psychological Experiments.* Implemented at New York University, DEC PDP/15. 121 pages.
- 1977 Burt, P., and Sperling, G. *NYUSHO. A Tutorial Guide.* 26 pages.
- 1977 Sperling, G. *A Method for the Variable Attenuation of the Sound Produced by a Piano.* Bell Telephone Laboratories Memorandum, October 28, 1977.
- 1977 Sperling, G. *Methods to Minimize Intrusions by Telephone.* Bell Telephone Laboratories Memorandum, October 28, 1977.
- 1978 Burt, P. and Sperling, G. *VEXSYS. A Computer System for Vision Experiments.* Unpublished memorandum, June 26, 1978 (36 pages).
- 1978 Sperling, G. *The Goal of Theory in Experimental Psychology.* Bell Telephone Laboratories Technical Memorandum 78-1221-12, July 26, 1978 (15 pages).
- 1980 Melchner, M. J. and Sperling, G. *VEX: A Computer System for Real-Time Vision Experiments.* Bell Telephone Laboratories Technical Memorandum 80-1225-11, June 19, 1980 (25 pages).

## Talks at Conferences and Meetings of Professional Societies

† Indicates an invited address.

†† Indicates a plenary address.

\* Indicates an abstract of talk was published.

Unless otherwise noted, items indicate talks given by George Sperling

- 1960 \*Optical Society of America, Washington, D. C., April 9, 1960. *Negative Afterimage without Prior Positive Image.*
- 1960 Eastern Psychological Association, New York, New York, April 16, 1960. *Visual Information Storage.*
- 1960 \*XVI International Congress of Psychology, Bonn, West Germany, August 4, 1960. *Visual Information Storage.*
- 1960 4th London Symposium on Information Theory, London, England, August 31, 1960. *Short Term Storage of Information in Vision.*
- 1960 \*Optical Society of America, Boston, Massachusetts, October 14, 1960. *Bistable Aspects of Monocular Vision.*
- 1961 \*Optical Society of America, Pittsburgh, Pennsylvania, March 2, 1961. *Impulse Responses in Foveal Vision.*
- 1961 The Psychonomic Society, New York, New York, September 1, 1961. *Spatial and Temporal Visual Masking.*
- 1962 †Symposium on Memory (Sponsored by the Office of Naval Research), Austin, Texas, January 25, 1962. *Two Kinds of Human Memory.*
- 1962 \*Optical Society of America, Washington, D.C., March 16, 1962. *The Visual Masking of 'Flashes' of Darkness by 'Flashes' of Darkness.*
- 1962 Eastern Psychological Association, Atlantic City, New Jersey, April 27, 1962. *Auditory Interference with a Visual Memory Task.*
- 1962 †Symposium on Information Processing in Man: Research Frontiers (Sponsored jointly by the Human Factors Society and the University of Southern California), Los Angeles, California, June 23, 1962. *A Model for Visual Memory Tasks.*
- 1962 The Psychonomic Society, St. Louis, Missouri, August 31, 1962. *Temporal Visual Masking. II. Theory.*
- 1962 \*American Psychological Association, St. Louis Missouri, September 3, 1962. *Visual Masking by Impulse Flashes as a Function of Masking Stimulus Energy and Background Intensity.*
- 1963 \*†Seventeenth International Congress of Psychology, Washington, D.C., August 23, 1963. *What Visual Masking Can Tell Us About Temporal Factors in Perception.*
- 1963 \*Optical Society of America, Jacksonville, Florida, March 27, 1963. *Essential Nonlinearity of Visual Masking by Flickering Light.*



- 1963 †Symposium on the Physiology of Flicker, Amsterdam, The Netherlands, September 9, 1963. *Linear Theory and the Psychophysics of Flicker*.
- 1963 †International Society for Clinical Electroretinography (ISCERG), Rotterdam, The Netherlands, September 12, 1963. *Summary of the Session on 'The Psychophysics of Flicker' and Some Conclusions to be Derived Therefrom*.
- 1964 With Roseanne Speelman, paper read by Roseanne Speelman. Eastern Psychological Association, Philadelphia, Pennsylvania, April 18, 1964. *The Effect of Sound of Stimuli upon Short-Term Memory*.
- 1964 \*Sperling, G., and Speelman, R. G. American Psychological Association, Los Angeles, California, September 7, 1964. *Spatial Localization during Eye Movements*.
- 1965 \*Sperling, G., and Speelman, R. G. Optical Society of America, Philadelphia, Pennsylvania, October 7, 1965. *Visual Spatial Localization During Object Motion, Apparent Motion, and Image Motion Produced by Eye Movements*.
- 1966 Symposium: Theory of Temporal Factors in Vision and Visual Perception. Center for Visual Science, University of Rochester, New York. June 6, 1966. *Eye Movement and Perceived Movement*.
- 1966 †Symposium: Theory of Temporal Factors in Vision and Visual Perception. Center for Visual Science, University of Rochester, New York, June 7, 1966. *Temporal Factors in Visual Masking*.
- 1966 †\*Eighteenth International Congress of Psychology, Moscow, USSR, August 10, 1966. *Successive Approximations to a Model for Short-Term Memory*.
- 1966 †Symposium on Attention and Performance. (Sponsored by the Institute for Perception RVO-TNO, Soesterberg, The Netherlands.) Driebergen, The Netherlands, August 18, 1966. *Vision During Eye Movements and During Object Movements*.
- 1966 \*Optical Society of America, San Francisco, California, October 21, 1966. *Comparisons of Real and Apparent Motion*.
- 1968 \*Western Psychological Association, San Diego, California, March 29, 1968. Tutorial Research Lecture: *The New Look in the Psychology of Vision*.
- 1968 Mathematical Psychology Meetings, Stanford University, Palo Alto, California, August 28, 1968. *Energy Models of Binocular Vision*.
- 1968 †Mathematical Psychology Meetings. Stanford University, Palo Alto, California, August 29, 1968. *Structural Considerations in Models of Memory*. (Incorporated into Group Discussion).
- 1968 \*American Psychological Association, San Francisco, California, September 1, 1968. *Phonemic Model of Short-Term Auditory Memory*.
- 1968 \*Optical Society of America, Pittsburgh, Pennsylvania, October 10, 1968. *Energy-Level Models of Binocular Vision*.
- 1968 †National Academy of Sciences, National Research Council, Conference on: The Influence of Early Experience on Visual Information Processing, Lake Mohonk, New York, October 28, 1968. *Short-Term Memory Storage in Visual Perception*.
- 1968 With Man Mohan Sondhi, paper read by George Sperling. Psychonomic Society, St. Louis, Missouri, November 1, 1968. *Model of Temporal Visual Discrimination*.

- 1969 \*North Atlantic Treaty Organization, Advanced Studies Institute on: On-Line Computing for Behavioral Science, Department of Psychology, Sheffield University, England. July 16, 1969: *Computer Parasites and Hosts: Practical Advice on How to be a Successful Parasite at Your Host's Computer Installation*. July 16, 1969: *Programming Visual Displays*. July 19, 1969: *Comparisons between the Structure of Computers and of Human Memory*. July 19, 1969: (1) *How to Produce Binocular Displays*, (2) *How to Calibrate Computer-Produced Displays*, (3) *Flicker in Computer Displays*.
- 1969 †\*Nineteenth International Congress of Psychology London, August 6, 1969. Symposium on Visual Masking and Meta-Contrast. *After One Hundred Years of Research in Perception, What's New? New Models*.
- 1969 †Symposium on Attention and Performance-III. (Sponsored by the Institute for Perception RVO-TNO, Soesterberg, The Netherlands.) Driebergen, The Netherlands, August 11, 1969. *Structural Factors in Models of Memory*.
- 1969 †Symposium on Visual Search, British Psychological Society, London, England, December 12, 1969. *Extremely Rapid Visual Scanning*.
- 1970 †Symposium on Memory, Experimental Psychology Society (Great Britain), National Hospital, Queens Square, London, January 3, 1970. *Structural Factors in Memory*.
- 1970 Association for Research in Ophthalmology, Sarasota, Florida, May 3, 1970. *Model of the Retina. Neuroanatomical Inferences from Psychophysical Data*.
- 1970 †Center for Visual Sciences, Sixth Annual Symposium: Spatial and Temporal Interactions in Vision, Rochester, New York. June 11, 1970. *Simple Model of Spatial Visual Interactions*.
- 1970 †Workshop on Processing Models in Perception and Psychophysics, Miami Beach, Florida, August 26, 1970. (Sponsored by the National Science Foundation, the Mathematical Social Science Board, and the Center for Advanced Study in the Behavioral Sciences.) *Elementary Neural Models for Perceptual Phenomena*.
- 1971 †Australian Psychological Society, Western Australian Branch, Perth, Western Australia, July 12, 1971. *Extremely Rapid Visual Search*.
- 1971 †Symposium on Attention and Performance-IV, Boulder, Colorado, August 21, 1971. *Hierarchical Aspects of Visual Information Processing*.
- 1971 †Mathematical Psychology Meeting, Princeton, New Jersey, September 2, 1971. *Neural Models of Perceptual Phenomena*.
- 1972 †Eastern Psychological Association Boston, Massachusetts, April 27, 1972. *Visual Search without Eye-Movements*.
- 1972 †Canadian Psychological Association, Montreal, Quebec, June 22, 1972. *On-Line Generation of Visual Displays*.
- 1972 †Conference on Vision, Sponsored by The Technical Study Group for Color Deficiency, The Society of Ophthal-Optics, The Study Group for Perception, and The Physiological Optics Group, Kowa Building, Tokyo, Japan, August 12, 1972. *Neural Models for Visual Processes*.
- 1972 †\*Twentieth International Congress of Psychology, Tokyo, Japan. August 14, 1972. *Structural Factors in Short-Term Memory*.

- 1972 †\*Sperling, George. Twentieth International Congress of Psychology, Tokyo, Japan. August 14, 1972. *Visual Masking*.
- 1972 †Sperling, George. American Psychological Association, Honolulu, Hawaii, Division 3 (Experimental Psychology), New Fellows Address, September 6, 1972. *Visual Search*.
- 1973 †Sperling, George. The Margaret E. Tresselt Memorial Conference, New York University. May 11, 1973. *The Search for the Highest Rate of Search*.
- 1973 †Sperling, George. Symposium on Attention and Performance-V., Saltsjöbaden, Stockholm, Sweden, August 1973. *Limits on the Spatial Range of Attention*.
- 1973 Sperling, George. Mathematical Psychology Meeting, University of Montreal, Quebec, Canada. August 1973. *Estimating Item and Order Information*.
- 1974 †Sperling, George. Society for Research in Child Development, Study Group on Theoretical and Practical Implications of Research on the Development of Deaf Children, New Orleans, August 26-30, 1974. *Future Prospects in Language and Communication for the Congenitally Deaf*.
- 1975 †Sperling, George. National Conference on the Use of On-Line Computing in Psychology, Boulder, Colorado, November 5, 1975. *Movement Perception in Computer-Driven Visual Displays*.
- 1975 Psychonomic Society, Denver, Colorado, November 7, 1975. *Multiple Detections in a Brief Visual Stimulus: The Sharing and Switching of Attention*.
- 1976 Sperling, George. First Annual Interdisciplinary Conference, Jackson, Wyoming, January 23, 1976. *The Sharing and Switching of Visual Attention*.
- 1976 †Sperling, George. International School of Biophysics. *Integration of Sensory Information*. Erice-Trapani, Sicily, Italy. April 21, 1976: *Visual Attention*. April 22, 1976: *Visual and Auditory Sensory Storage*.
- 1976 †Workshop in the Theory and Measurement of Economic Choice Behavior, University of California, Berkeley, California, June 19, 1976. *Two Models for Economics from Psychology*.
- 1976 †With Melvin J. Melchner, talk presented by George Sperling. Attention and Performance VII, Abbaye de Senanque, Gordes, France. August 4, 1976, *Attention Operating Characteristics for Visual Search*.
- 1976 †Ninth Annual Mathematical Psychology Meeting, New York University, New York, NY, August 31, 1976. *Attention Operating Characteristics for Visual Search*.
- 1976 †With Melvin J. Melchner, paper read by John Krauskopf. Fourth Symposium of Sensory Physiology. Leningrad, U.S.S.R., November 3, 1976. *Visual Search and Visual Attention*.
- 1976 With Adam Reeves, talk presented by George Sperling. Psychonomic Society, Saint Louis, Missouri, November 11, 1976. *Reaction Time of an Unobservable Response*.
- 1977 Sperling, George. Second Interdisciplinary Conference, Jackson Hole, Wyoming, January 12, 1977. *Measuring the Reaction Time of an Unobservable Response: A Shift of Visual Attention*.
- 1977 Sperling, George. Society of Experimental Psychologists, Yale University, New Haven, Connecticut. April 1, 1977. *Visual Search, Visual Attention, and the Attention Operating Characteristic*.

- 1977 With Adam Reeves, talk presented by Adam Reeves. Eastern Psychological Association, Boston, Massachusetts, April 15, 1977. *Order Information in Short-Term Visual Memory.*
- 1977 With Adam Reeves, talk presented by George Sperling. Tenth Annual Mathematical Psychology Meeting, University of California, Los Angeles, August 23, 1977. *Attentional Theory for Order Information in Short-Term Visual Memory.*
- 1977 †Sperling, George. American Psychological Association, San Francisco, California, August 28, 1977. *Recent Developments in the Study of Imagery: A Discussion.*
- 1978 Sperling, George. Third Annual Interdisciplinary Conference, Jackson, Wyoming, January 19, 1978. *The Representation of Order Information in Short-Term Visual Memory.*
- 1978 \*Burt, P., and Sperling, G. Talk presented by Peter Burt. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 5, 1978. *Contribution of Spatial and Temporal Separation and of Feature Similarity to Perceived Movement.*
- 1978 \*Sperling, G., and Reeves, A. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 5, 1978. *Measuring the Reaction Time of a Shift of Visual Attention.*
- 1978 †With Jane Kaufman, talk presented by G. Sperling. Attention and Performance VIII, Educational Testing Service, Princeton, New Jersey, August 22, 1978. *Three Kinds of Visual Short-Term Memory.*
- 1978 \*Burt, P., Sperling, G., and Julesz, B. Talk presented by Peter Burt. Optical Society of America, San Francisco, California, October 31, 1978. *The Range of Stereopsis.*
- 1978 †Sperling, George. Brain Theory Day, Boston University, Boston, Mass., November 18, 1978. *Visual Attentive Processes: Implications for Brain Theory.*
- 1979 With Peter Burt, talk presented by George Sperling. Fourth Annual Interdisciplinary Conference, Jackson, Wyoming. January 26, 1979. *Visual Motion Perception in Ambiguous Displays: Experiments and a General Theory.*
- 1979 With Eileen Kowler, talk presented by Eileen Kowler. Eastern Psychological Association, Fiftieth Annual Meeting, Philadelphia, Pennsylvania, April 19, 1979. *The Effect of Saccade-Like Changes of the Retinal Image on Visual Information Processing.*
- 1979 \*Kowler, E., and Sperling, G. Talk presented by E. Kowler, Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 2, 1979. *Saccade-Like Image Perturbations Do Not Aid Visual Information Processing.*
- 1979 \*Didner, R. S., and Sperling, G. Poster presented by Robert Didner. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 2, 1979. *Perceptual Delay in Metacontrast and in Apparent Motion.*
- 1979 †With Peter Burt, talk presented by George Sperling. Society for Mathematical Psychology, Twelfth Annual Meeting, Brown University, Providence, Rhode Island, August 29, 1979. *Theory of the Time-Distance Trade-Off in Visual Apparent Motion.*
- 1979 †Sperling, George. Society for Mathematical Psychology, Twelfth Annual Meeting, Brown University, Providence, Rhode Island, August 31, 1979. *Visual Attention: Reaction-Time Distributions and Operating Characteristics.*
- 1980 With Eileen Kowler, talk presented by George Sperling. Fifth Annual Interdisciplinary Conference, Jackson, Wyoming. January 15, 1980. *Stimulus Transients in Visual Search -- Are They Necessary?*

- 1980 Sperling, George. Fifth Annual Interdisciplinary Conference, Jackson, Wyoming. January 17, 1980. *Some Problems in the Communication of American Sign Language.*
- 1980 Sperling, George. Acoustics and Behavioral Research Center, Bell Laboratories, Murray Hill, N.J., Research Calendar Talk (M.V. Mathews, Sponsor). January 23, 1980. *Review of a Symposium to Compare C and PASCAL.*
- 1980 †American Mathematical Society, Symposium on Mathematical Psychology, Philadelphia, Pennsylvania. April 15, 1980. *Mathematical Models of Perception.*
- 1980 Sperling, George. Optical Society of America, Topical Meeting on Recent Advances in Vision, Sarasota, Florida. May 3, 1980. *Low Bandwidth Visual Communication for the Deaf.*
- 1980 †Sperling, George. American Psychological Association, Montreal, Quebec, Invited Address. September 4, 1980. *Measuring Attention.*
- 1981 Sperling, George. Sixth Annual Interdisciplinary Conference, Park City, Utah. January 22, 1981. *Catastrophe Theory of Binocular Vision.*
- 1982 Sperling, George. Seventh Annual Interdisciplinary Conference, Jackson, Wyoming. January 29, 1982. *Attendance Theory: Introduction to Signal Detection Theory and Attention Theory.*
- 1982 With J. P. H. van Santen, talk presented by George Sperling. USAF Review of Sponsored Basic Research in Human Information Processing, Sarasota, Florida, May 9, 1982. *Models of Motion Perception.*
- 1982 †Sperling, George. Harry Frank Guggenheim Conference on Animal Cognition, Columbia University, New York, N.Y. June 4, 1982. *Lessons for Animal Cognitive Psychologists.*
- 1982 †Society for Mathematical Psychology, Fifteenth Annual Meeting, Princeton University, Princeton, New Jersey, August 8, 1982. *A Unified Theory of Attention and Signal Detection.*
- 1982 †With M. Pavel, Yoav Cohen, Michael S. Landy, and Barry J. Schwartz. Rank Prize Funds, International Symposium on Physical and Biological Processing of Images, The Royal Society of London, London, England, September 29, 1982. *Image Processing in Perception and Cognition.*
- 1983 Society of Experimental Psychologists, University of California, San Diego, California, March 25, 1983. *A Unified Theory of Attention and Signal Detection.*
- 1983 \*Farrell, Joyce E., Pavel, Misha, and Sperling, George. Poster presentation. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 2, 1983. *Visible Persistence of Stimuli in Apparent Motion.*
- 1983 \*Schwartz, B. J., and Sperling, G. Talk presented by Barry Schwartz. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 4, 1983. *Nonrigid 3D Percepts From 2D Representations of Rigid Objects.*
- 1983 \*Kowler, E., and Sperling, G. Talk presented by Eileen Kowler. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 4, 1983. *Abrupt Onsets Do Not Aid Visual Search.*
- 1983 \*van Santen, J. P. H., and Sperling, G. Talk presented by Jan van Santen. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 4, 1983. *A Temporal Covariance Model of Motion Perception.*

- 1983 †Sperling, G., and Reeves, A. New York Academy of Sciences, Conference on Timing and Time Perception, New York, New York, May 10, 1983. *Temporal Order of Brief Visual Events*.
- 1983 van Santen, J. P. H., and Sperling, G. Society for Mathematical Psychology, Sixteenth Annual Meeting, Boulder, Colorado, August 12, 1983. *A New Class of Models of Motion-Sensitive Units in Human Vision*.
- 1983 †\*Sperling, G. Psycholinguistics Circle of New York, New York University, New York, November 9, 1983. *Image Processing Studies of American Sign Language*.
- 1983 Cohen, Y., Landy, M. S., Pavel, M., and Sperling, G. Talk presented by Michael Landy. Society for Computers in Psychology, Thirteen Annual Meeting, San Diego, California, November 16, 1983. *HIPS<sup>†</sup>: Picture Processing under UNIX -- Software and Applications*.  
<sup>†</sup>HIPS is the Human Information Processing Laboratory's Image Processing System.
- 1983 \*Sperling, G., and Reeves, A. Psychonomic Society, San Diego, California, November 18, 1983. *Gating model of visual attention*.
- 1984 Ninth Annual Interdisciplinary Conference, Jackson, Wyoming, January 24, 1984. *Elementary Motion-Detecting Units*.
- 1984 \*van Santen, J. P. H., and Sperling, G. Talk presented by Jan van Santen. Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 30, 1984. *Applications of a Reichardt-Type Model to Two-Frame Motion*.
- 1984 \*Weichselgartner, E., and Sperling, G. Poster, presented jointly. Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 30, 1984. *Psychophysical Method for the Continuous Measurement of Visible Persistence*.
- 1984 \*Landy, M. S., and Sperling, G. Poster, presented jointly. Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 30, 1984. *Image Processing in Visual Psychophysical Research*.
- 1984 \*Reeves, A., and Sperling, G. Poster presented jointly. Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 30, 1984. *Visual Temporal Order Perception*.
- 1984 †USAF Review of Sponsored Basic Research in Human Information Processing, Sarasota, Florida, May 8, 1984. *A Gating Model of Shifts of Visual Attention*.
- 1984 † Second Workshop on Human and Machine Vision, International Symposium on Pattern Recognition, Montreal, Canada August 1, 1984. *The Resolution of Perceptual Ambiguity*.
- 1984 † Symposium on Mathematical Theories of Motion Perception, Society for Mathematical Psychology, Seventeenth Annual Meeting, Chicago, Illinois August 22, 1983. *Theories of Motion Perception*.
- 1984 †van Santen, J. P. H., and Sperling, G. Talk presented by Jan van Santen. Symposium on Mathematical Theories of Motion Perception, Society for Mathematical Psychology, Seventeenth Annual Meeting, Chicago, Illinois August 22, 1983. *The Elaborated Reichardt Model of Motion Perception*.
- 1984 †Sperling, G., and van Santen, J. P. H. American Psychological Association, Toronto, Canada, Symposium on Recent Advances in Understanding Stroboscopic Motion, August 25, 1984. *The Mechanism of Human Short-Range Motion Perception*.

- 1984 † Workshop on the Systems Approach in Vision Dedicated to Prof. L. H. van der Tweel, Koninklijke Nederlandse Akademie van Wetenschappen, Amsterdam, The Netherlands. August 29, 1984. *Models of Motion Perception*.
- 1984 \*Farrell, J. E., Pavel, M., and Sperling, G. Talk presented by Joyce Farrell. Seventh European Conference on Visual Perception, Cambridge, England, September 3, 1984. *Visible Persistence and Apparent Motion*.
- 1984 \*Doshier, B. A., Sperling, G., and Wurst, S. Talk presented by Barbara Doshier. Optical Society of America, San Diego, California, October 31, 1984. *Stereopsis Versus Proximity-Luminance Covariance as Determinants of Perceived Three-Dimensional Structure*.
- 1984 \*Sperling, G., Parish, D. H., Pavel, M., and Desaulniers, D. H. Psychonomic Society, San Antonio, Texas, November 11, 1984. *Auditory List Recall: Phonemic Structure, Acoustic Confusibility, and Familiarity*.
- 1984 † CAVIL, Cognitive and Verbal Investigators League Adelphi University, Garden City, Long Island, New York, December 8, 1984. *A Unified Theory of Attention and Signal Detection*.
- 1985 Tenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 16, 1985. *Image Processing Studies of American Sign Language*.
- 1985 \*Weichselgartner, E., Sperling, G., and Reeves, A. Talk presented by Erich Weichselgartner. Eastern Psychological Association, Fifty-Sixth Annual Meeting, Boston, Massachusetts, March 24, 1985. *Effects of Concurrent Tasks, Distance, and Visual Obstacles on Shifts of Visual Attention*.
- 1985 \*Sperling, G., and Parish, D. H. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 10, 1985. *Forest-in-the-Trees Illusions*.
- 1985 † Lecture Course in Computational Neuroscience Cold Spring Harbor Laboratory Cold Spring Harbor, New York.  
 June 20, 1985: *The Theory of and Experimental Evidence for Generalized Reichardt Models of Motion Perception*.  
 June 24, 1985: *The Role of Time and Distance in Apparent Motion*.  
 June 24, 1985: *Integrating Perceptual Information in Computing Structure from Motion: Physical, Neural, and Psychological Models*.
- 1985 †George Sperling and Michael S. Landy, Grossberg/Rosenfeld Workshop on Human and Machine Vision, Boston, Massachusetts, Nov 20-21. *Visual Transmission of Intelligible American Sign Language at Extremely Low Information Rates*.
- 1985 \*Landy, M. S., Doshier, B. A., and Sperling, G. Talk presented by Michael Landy. Psychonomic Society, Boston, Massachusetts, November 23, 1985. *Assessing Kinetic Depth in Multi-Dot Displays*.
- 1986 Doshier, B. A., Sperling, G., and Wurst, S. A. Eleventh Annual Interdisciplinary Conference, Whistler, British Columbia, Canada, February 10, 1985. *Additivity of Luminance and Stereopsis Cues in KDE*.
- 1986 Sperling, George. Eleventh Annual Interdisciplinary Conference, Whistler, British Columbia, Canada, February 11, 1985. *Gating Model of Visual Attention*.
- 1986 \*Erich Weichselgartner and George Sperling, Talk presented by Erich Weichselgartner. Eastern Psychological Association, Fifty-Seventh Annual Meeting, New York, New York, April 19, 1986. *Two Processes in Visual Attention*.

- 1986 †Sperling, George. Symposium on Computational Models in Human Vision, Center for Visual Science, University of Rochester, New York. June 20, 1986. *Reichardt Models of Motion Detection*.
- 1986 \*Erich Weichselgartner and George Sperling, Talk presented by Erich Weichselgartner. 35th Meeting of the German Society of Psychology, Heidelberg, Germany, September 28, 1986, Symposium on Attention. *Gleichzeitige Erfassung des Zeitverlaufs Zweier Visueller Aufmerksamkeitsprozesse. (Estimation of the time course of two concurrent attentional processes.)*
- 1986 \*George Sperling and Erich Weichselgartner, Psychonomic Society, New Orleans, Louisiana, November 14, 1986. *Measuring the time course of automatic and controlled attention*.
- 1987 Sperling, George. Twelfth Annual Interdisciplinary Conference, Jackson, Wyoming, January 7, 1987. *Fourier and Non-Fourier Motion Systems*.
- 1987 \*Landy, Michael S., George Sperling, Barbara Anne Doshier and Mark Perkins, Talk presented by Michael S. Landy, Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 7, 1987. *From what kind of motions can structure be inferred?*
- 1987 \*Chubb, Charles, and George Sperling, Talk presented by Charles Chubb, Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 7, 1987. *Drift-balanced random stimuli: A general basis for studying nonFourier motion perception*.
- 1987 \*George Sperling and Barbara Anne Doshier, Poster, presented jointly, Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 8, 1987. *Predicting rigid and nonrigid perceptions*.
- 1987 \*Parish, David H. and George Sperling, Poster, presented jointly. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 8, 1987. *Object spatial frequency, not retinal spatial frequency, determines identification efficiency*.
- 1987 †Sperling, George. IEEE First Annual International Conference on Neural Networks. San Diego, California. June 20, 1987. Tutorial: *Neurobiology Review*.
- 1987 †Sperling, George. Fechner Centennial, International Conference in Honour of G. Th. Fechner, Developments in Psychophysical Theory, Psychological Institute, University of Bonn, Bonn, Germany. June 27, 1987. *NonFourier Motion Perception*.
- 1987 \*Michael S. Landy, George Sperling, Mark E. Perkins, and Barbara A. Doshier. Talk presented by Michael S. Landy. Optical Society of America A, Rochester, New York, October 22 1987. *Perception of Complex Shape from Optic Flow*.
- 1987 \*George Sperling and David H. Parish, Psychonomic Society, Seattle, Washington, November 8, 1987. *Efficiency of Human Letter Recognition*.
- 1987 †George Sperling and Charles Chubb, AFOSR Program in Visual Information Processing, Annapolis, Maryland, December 16, 1987. *Non-Fourier Motion and Texture Perception*.
- 1988 George Sperling and David H. Parish, Thirteenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 26, 1988. *The Efficiency of Object Recognition*.
- 1988 †Sperling, George. Visual Form and Motion Perception: Psychophysics, Computation, and Neural Networks. (Meeting dedicated to the memory of the late Kvetoslav Prazdny.) Boston University, Massachusetts. *Fourier and Non-Fourier Perception of Motion and Orientation*. Saturday, March 5, 1988.



- 1988 \*George Sperling and Thomas R. Riedl, Poster presented by George Sperling, Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 3, 1988. *Summation and Masking Between Spatial Frequency Bands in Dynamic Natural Visual Stimuli.*
- 1988 \*Chubb, Charles, and George Sperling, Talk presented by Charles Chubb. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 5, 1988. *Processing Stages in Non-Fourier Motion Perception.*
- 1988 †Sperling, George. Conference: Toward a Video-Telephone for Deaf and Hard of Hearing People, Gallaudet Research Institute, Technology Assessment Program, Washington, D.C. May 26, 1988. *Evaluations of Low Bandwidth Video Communication Systems.*
- 1988 †Sperling, George. XXIV International Congress of Psychology, Sydney, Australia, August 29, 1988. *Processing Stages in Visual Motion and Pattern Perception.*
- 1988 †Sperling, George. International Neural Network Society Boston, MA, September 9, 1988. *Some Principles of Neural Organization Inferred from Psychophysics.*
- 1988 \*George Sperling and Karl Gegenfurtner, Psychonomic Society, Chicago, Illinois, November 10, 1988. *Two Transfer Processes in Iconic Memory.*
- 1989 Sperling, George. Fourteenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 16, 1989 *Two Motion and Texture Perception Systems.*
- 1989 \*Charles Chubb and George Sperling, Talk presented by Charles Chubb. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 2, 1989. *Texture Interactions Determine Apparent Lightness.*
- 1989 \*George Sperling and Charles Chubb. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 4, 1989. *Apparent Motion Derived from Spatial Texture.*
- 1989 \*Charles Chubb and George Sperling. Talk presented jointly, IEEE Workshop on Motion, Newport Beach, California, March 21, 1989. *Second-Order Motion Perception: Space/Time Separable Mechanisms.*
- 1989 \*David H. Parish, George Sperling and Michael S. Landy, Talk presented by David H. Parish. Topical Meeting on Applied Vision, Optical Society of America, San Francisco, California July 12, 1989. *Temporal Compression of American Sign Language Using Event Boundaries.*
- 1989 †Invited Address: 1988 Distinguished Scientific Contribution Award, American Psychological Association, New Orleans, Louisiana, August 16, 1989. *Computational Models of Attention.*
- 1989 ††Sperling, George. Plenary lecture, NIPS, The IEEE Conference on Neural Information Processing Systems - Natural and Synthetic, Denver, Colorado, November 29, 1989. *Visual Preprocessing.*
- 1990 Sperling, George. Fifteen Annual Interdisciplinary Conference, Jackson, Wyoming, January 9, 1990. *Vision During Saccadic Eye Movements.*
- 1990 ††Sperling, George. Plenary lecture, International Joint Conference on Neural Networks, Washington, D.C., *Parallel Systems of Visual Processing.*
- 1990 †Sperling, George. National Research Council, Committee on Vision, Workshop on Visual Search, Newport Beach, California. *Visual Preprocessing.*

- 1990 Sperling, George. ††German Congress of Experimental Psychologists Regensburg, Germany, Plenary address, April 11, 1990. *Computational Theories of Attention*.
- 1990 \*Anne Sutter, George Sperling, and Charles Chubb. Poster. Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 30, 1990. *Measuring the Spatial Frequency Selectivity of Second-Order Texture Mechanisms*.
- 1990 \*Joshua A. Solomon Charles Chubb, and George Sperling. Talk presented by Joshua A. Solomon. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 4, 1990. *The Lateral Inhibition of Perceived Textural Contrast is Orientation Specific*.
- 1990 Sperling, George. 86th Meeting of the Society of Experimental Psychologists, Columbia University, New York, NY, May 19, 1990. *Perceptual Preprocessing*.
- 1990 †\*Sperling, George. Symposium on Attention and Performance 15, Ann Arbor Michigan, July 10, 1990. *Within a Location, Selective Attention Does Not Produce Early Perceptual Filtering*.
- 1990 †Sperling, George. Siggraph Conference, Pace University, New York, NY, October 14, 1990 *Perceptual Basis of Three-Dimensional Vision*
- 1990 \*George Sperling and Erich Weichselgartner, Psychonomic Society, New Orleans, Louisiana, November 16, 1990. *Episodic Theory of Visual Attention*.
- 1990 Wurst, Stephen A., George Sperling, and Barbara Anne Doshier. Evidence for a central locus of short-term visual repetition memory. Poster, presented jointly Psychonomic Society, New Orleans, Louisiana, November 16, 1990.
- 1991 †George Sperling, Helmholtz Club, University of California, Irvine, February 5, 1991. *Dynamics of Visual Attention: Review and a Theory*.
- 1991 George Sperling, 87th Meeting of the Society of Experimental Psychologists, University of California at Los Angeles, March 16, 1991. *A Theory of Spatial Attention*.
- 1991 \*Solomon, Joshua A, and George Sperling. Talk presented by Joshua A. Solomon. Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 29, 1991. *Can we see 2nd-order motion and texture in the periphery?*
- 1991 \*Werkhoven, Peter, Charles Chubb, and George Sperling. Poster, presented jointly Association for Research in Vision and Ophthalmology, Sarasota, Florida, April 29, 1991. *Texture-defined motion is ruled by an activity metric--not by similarity*.
- 1991 \*Sutter, Anne, George Sperling and Charles Chubb, Poster, presented jointly Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 1, 1990. *Further measurements of the spatial frequency selectivity of second-order texture mechanisms*.
- 1991 Sperling, George. Sixteenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 24, 1991. *Attentional Filtering in Visual Short-Term Memory*.
- 1991 †George Sperling, Neural Networks for Vision and Image Processing. An International Conference Sponsored by Boston University's Wang Institute, Center for Adaptive Systems, Tyngsboro, MA 01879, May 11, 1991. *Two Systems of Visual Processing*.
- 1991 †George Sperling, Neural and Visual Computation Symposium Center for Neural Sciences New York University, NY, May 31, 1991. *The Spatial, Temporal, and Featural Mechanisms of Visual Attention*.

- 1991 †George Sperling, National Academy of Sciences, National Research Council, Committee on Vision, Conference of Visual Factors in Electronic Image Communications, Woods Hole, MA, July 23, 1991. *Empirical Observations on Image Compression and Comprehension.*
- 1991 †George Sperling, The International Society for Psychophysics, Washington Duke Inn, Duke University, Durham, North Carolina, New York University, NY October 19, 1991. *The Featural Mechanism of Visual Attention.*
- 1991 †\*Chubb, C., Solomon, J. A. and Sperling, G. Invited Talk presented by Charles Chubb. Optical Society of America, San Jose, California November 7, 1991, *Contrast Contrast Determines Perceived Contrast.*
- 1991 \*George Sperling and Stephen Wurst. Psychonomic Society, San Francisco, California November 22, 1991. *Selective Attention to an Item is Stored as a Feature of the Item.*
- 1992 Sperling, George. Seventeenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 12, 1992. *Is Attentional Selection by Feature of Location?*
- 1992 \*Shui-I Shih and George Sperling. Eastern Psychological Association, Boston, Massachusetts, April 4, 1992. *Cluster Analysis as a Tool to Discover Covert Strategy.*
- 1992 \*Werkhoven, P., Sperling, G., and Chubb, C. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 6, 1992. *The Dimensionality of Motion From Fixture.*
- 1992 XXV International Congress of Psychology Bussels, Belgium, July, 23, 1992. *Computational Models of Early Vision.*
- 1992 \*Werkhoven, W., Sperling, G., and Chubb, C. Optical Society of America, Albuquerque, New Mexico, September 25, 1992. *Energy Computations in Motion and Texture.*
- 1992 \*George Sperling and Hai-Jung Wu, Psychonomic Society, Dallas, Texas, November 15, 1992. *Defining and Teaching Objectively Accurate Confidence Judgments.*
- 1993 Sperling, George. Eighteenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 18, 1993. *2nd-Order Motion Perception.*
- 1993 †\*Sperling, George and Doshier, Barbara A. Linking Psychophysics, Neurophysiology and Computational Vision. A Conference to Celebrate Bela Julesz' 65th Birthday. Rutgers University, New Brunswick, New Jersey, May 1, 1993. *Structure-from-motion: Algorithms, Illusions, Mechanisms.*
- 1993 \*Solomon, J. A. and Sperling, G. Talk presented by Joshua A. Solomon. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 4, 1993. *Fullwave and Halfwave Rectification in Motion Perception.*
- 1993 \*Shih, S., and Sperling, G. Talk presented by Shui-I Shih. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 6, 1993. *Visual Search, Visual Attention, and Feature-Based Stimulus Selection.*
- 1993 \*Lu, Z.-L., and Sperling, G. (1993) Talk presented by Zhong-Lin Lu. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 6, 1993. *2nd-Order Illusions: Mach bands, Craik--O'Brien--Cornsweet.*
- 1993 \*Chubb, C., Darcy, J. and Sperling, G. Talk presented by Charles Chubb. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 6, 1993. *Metameric Matches in the Space of Textures Comprised of Small Squares with Jointly Independent Intensities.*

- 1993 †Sperling, George. Geometric Representation of Perceptual Phenomena. A Conference in Honor of Tarow Indow. University of California, Irvine. July 28, 1993. *The Representation of Motion and Texture*.
- 1993 †Sperling, George. Society for Mathematical Psychology, Twenty-Sixth Annual Meeting, Norman, Oklahoma. Plenary lecture. August 17, 1993. *Second-Order Perception*.
- 1993 †\*Sperling, George. Ciba Foundation Symposium No: 184. Higher-Order Processing in the Visual System. The Ciba Foundation, 41 Portland Place, London, UK. October 21, 1993. *Full-Wave and Half-Wave Mechanisms in Motion and Texture Perception*.
- 1993 †Sperling, George. International Workshop on Digital Video for Intelligent Systems. Hosted by Department of Electrical and Computer Engineering, University of California, Irvine, California. December 17, 1993. *An Engineering Model of Human Visual Processing / Intelligibility of Extremely Reduced Images*.
- 1994 Sperling, George. Nineteenth Annual Interdisciplinary Conference, Jackson, Wyoming, January 20, 1994. *A Theory of Spatial Attention*.
- 1994 †Sperling, George. Western Psychological Association, Kona, Hawaii, Invited Lecture, April, 22, 1994, *Second-Order Perception*.
- 1994 \*Sperling, G., and Lu, Z.-L. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 2, 1994. *Immunity to Pedestals Distinguishes Motion-Energy from Feature-Tracking Motion-Perception Mechanisms*.
- 1994 †\*Sperling, George. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 2, 1994. *Second-Order Perception*.
- 1994 \*Lu, Z.-L., and Sperling, G. Talk presented by Zhong-Lin Lu. Association for Research in Vision and Ophthalmology, Sarasota, Florida, May 6, 1994. *Deriving the Dimensions of Texture Perception from Metameric Texture Matches*.
- 1994 †\*Sperling, G., Lu, Z.-L., Chubb, C., and Solomon, J. A. Talk presented by Zhong-Lin Lu. Joint meeting: World Congress of Computational Intelligence/IEEE Neural Networks/Fuzzy Logic/Evolutional Computation. Orlando, Florida. Plenary lecture: *Visual Preprocessing: First- and Second-Order Processes in the Perception of Motion and Texture*.
- 1994 †Sperling, George. Centennial Conference in Honour of Hermann v. Helmholtz, "From Codes to Cognition. Foundational Aspects of Visual Information Processing." Christian-Albrechts-Universitaet zu Kiel, Kiel, Germany. July 21, 1994. *Computational Principles of Visual Perceptual Processing*.
- 1994 †Sperling, George. American Psychological Association, Symposium on Spatial Attention, Los Angeles, California. August 12, 1994. *A Computational Theory of Visual Spatial Attention*.
- 1994 \*George Sperling and Shui-i Shih. Psychonomic Society, Saint Louis, Missouri, November 13, 1994. *Mechanisms of Feature-Based Attentional Selection in Visual Search*.
- 1995 Sperling, George. Twentieth Annual Interdisciplinary Conference, Jackson, Wyoming, January 23, 1995. *Historical Review: First- and Second-Order Visual Processing*.  
January 25, 1995. *Experiments with American Sign Language*.
- 1995 \*Lu, Z.-L., and Sperling, G. Talk presented by Zhong-Lin Lu. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 16, 1995. *Drastically different saturation for luminance motion versus texture-contrast motion*.

- 1995 \*Sperling, G., and Lu, Z.-L. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 18, 1995. *Attention affects the perceived direction of visual motion.*
- 1995 \*Sperling, G., and Shih, S. Talk presented by Shui-I Shih. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 18, 1995. *A model of selective attention in early visual processing.*
- 1995 Sperling, G., and Weichselgartner, E. Cognitive Science Association for Interdisciplinary Learning (CSAIL). Hood River, Oregon, July 13-14, 1995. *Quantal versus Continuous Dynamics of Spatial Attention: An Episodic Theory.*
- 1995 Sperling, G. †Symposium to Honor R. Duncan Luce, University of California, Irvine, California. August 2, 1995. *Quantal versus Continuous Dynamics of Spatial Attention*
- 1995 Lu, Z.-L., and Sperling, G. Talk presented by Zhong-Lin Lu. Society for Mathematical Psychology, Twenty-Eighth Annual Meeting, University of California, Irvine, California. *Modeling the Three Systems of Human Visual Motion Perception.*
- 1995 Sperling, G., and Lu, Z.-L. Society for Mathematical Psychology, Twenty-Eighth Annual Meeting, University of California, Irvine, California. Deriving the properties of contrast gain control in visual motion perception
- 1995 †Sperling, G. European Mathematical Psychology Meeting, Regensburg, Germany, Luce Symposium, September 5, 1995. *Deriving the tripartite functional architecture of visual motion perception.*
- 1995 \*Sperling, G., and Lu, Z.-L. Psychonomic Society, Los Angeles, California. November 12, 1995. *Visual Attention Operates Via a Saliency Map.*
- 1996 Lu, Z.-L. and Sperling, G. Talk presented by Zhong-Lin Lu. Twenty-First Annual Interdisciplinary Conference, Jackson, Wyoming, January 30, 1996. *Gain-Control in Motion Processing.*
- 1996 Sperling, G., and Lu, Z.-L. Twenty-First Annual Interdisciplinary Conference, Jackson, Wyoming, January 31, 1996. *Saliency Model of Spatial Attention.*
- 1996 George Sperling, 92th Meeting of the Society of Experimental Psychologists, Brown University, March 23, 1996. *Theory of Spatial Attention.*
- 1996 \*Chubb, C., Lu, Z.-L., and Sperling, G. Poster presented jointly. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 23, 1996. *Algorithm for extracting structure in natural images yields simple cell-like receptive fields.*
- 1996 \*Lu, Z.-L., and Sperling, G. Poster presented jointly. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 24, 1996. *The Lincoln Picture nonproblem.*
- 1996 \*Richman, S., Lu, Z.-L., and Sperling, G. Poster presented jointly. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 24, 1996. *Flicker motion.*
- 1996 \*Sperling, G., and Lu, Z.-L. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 25, 1996. *Second-order reversed-phi reveals two mechanisms: Second-order motion energy and third-order feature saliency.*

- 1996 †\*Society for Information Display, International Symposium, Convention Center, San Diego, California, May 16, 1996. First-principles of second-order perception.
- 1996 †Air Force Office of Scientific Research, Workshop, Wright-Patterson Air Force Base, Dayton, OH, June 5, 1996. *Computational Models of Perceptual Processes*.
- 1996 †Western Attention Meeting, Hosted by Claremont Colleges, Pomona, College, Claremont, CA, June 9, 1996. *Computational Theory of Visual Attention*.
- 1996 Shih, S. and Sperling, G. XXVI International Congress of Psychology, Montreal, Canada, August 18, 1996. *The Time Course of Covert Attention Shifts*.
- 1996 †\*Sperling, G. (1996). XXVI International Congress of Psychology, Montreal, Canada, August 19, 1996. *The Mechanism of Visual Attention is the Spatio-Temporal Saliency Map*.
- 1996 †\*Sperling, G. and Lu, Z.-L. (1996). XXVI International Congress of Psychology, Montreal, Canada, August 20, 1996. *The Functional Architecture of Visual Motion Perception*.
- 1996 ††Plenary evening lecture. Workshop on: Short-term Storage and Processing in Human Cognition: Dynamic Characteristics and Neural mechanisms. Leipzig, Germany. November 22, 1996. *Mechanisms of Visual Short-Term Memory and Attention*.
- 1997 Sperling, G. Twenty-Second Annual Interdisciplinary Conference, Jackson, Wyoming, February 4, 1997. *Real and Simulated Saccades; Real and Stroboscopic Motion*.
- 1997 ††Tagung experimentell arbeitender Psychologen, 39 (TeaP, 39th Conference of Experimental Psychologists), Humboldt University, Unter den Linden, Berlin, Germany. March 24-27, 1997. Plenary lecture (March 26). *Atoms of the Mind: An Historic Overview of Theories of Attention*.
- 1997 \*Sperling, G., and Lu, Z.-L. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 12, 1997. *Proving the Independence of First- and Second-Order Motion Systems*
- 1997 \*Lu, Z.-L. and Sperling, G. Talk presented by Zhong-Lin Lu. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 12, 1997. *Selective Adaptation of Three Motion Systems*.
- 1997 \*Blaser, E., and Sperling, G. Talk presented by E. Blaser. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 12, 1997. *Measuring the Spatial Resolution of Visual Attention*.
- 1997 \*Chubb, C., Lu, Z.-L., and Sperling, G. Talk presented by C. Chubb. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 12, 1997. *Statistically Certified Unsupervised Learning*.
- 1997 \*Sperling, G., and Lu, Z.-L. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 12, 1997. *Proving the Independence of First- and Second-Order Motion Systems*
- 1997 †Workshop on Vision, Recognition, Action: Neural Models of Mind and Machine, Boston University, May 30, 1997. *An Integrated Theory for Attentional Processes in Vision, Recognition, and Memory*.
- 1997 \*Sperling, G., and Shih, S. (1997). Psychonomic Society, Philadelphia, PA., November 21, 1997. *Measuring and Modeling Selective Attention in Early Visual Processing*.

- 1998 Sperling, G. Twenty-Third Annual Interdisciplinary Conference, Jackson, Wyoming, February 2, 1998. *Update on the Three Systems Theory of Motion Perception.*
- 1998 94th Annual Meeting of the Society of Experimental Psychologists Laguna Beach, California, March 28, 1998. *Second-Order Perception.*
- 1998 \*Sperling, G., and Lu, Z.-L. (1998). Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, March 12, 1998. *Update on the Three-Motion-Systems Theory.*
- 1998 \*Richman, S., and Sperling, G. Poster presented by S. Richman. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, March 13, 1998. *Perception of line-segment textures.*
- 1998 \*Blaser, E., and Sperling, G. Talk presented by E. Blaser. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 14, 1998. *Measuring Attention to Color Using an Equivalent Chromaticity Paradigm.*
- 1998 †\*European Conference on Visual Perception Oxford University, Oxford, England, August 25, 1998 *First- Second- and Third-Order Motion Systems.*
- 1998 †\*Sperling, G., and Shih, S. (1998). Talk presented by G. Sperling. 29th European Mathematical Psychology Group Meeting Keele University, Keele, Staffordshire, England, September 1, 1998. *A Mathematical Theory of Iconic Memory and Attention.*
- 1998 \*Sperling, G., and Blaser, E. Psychonomic Society, Dallas Texas, November 20, 1998. *Measuring and Modeling Selective Attention in Early Visual Processing.*
- 1999 †Catalina Workshop on Visual Attention and Neural Circuits. Sponsored by California Institute of Technology and The Office of Naval Research, Two Harbors, Catalina Island, January 8, 1999. *Computational Models of Attention.*
- 1999 Sperling, G. Twenty-Fourth Annual Interdisciplinary Conference, Jackson, Wyoming, February 1, 1999. *Tutorial Overview of Higher-Order Motion Systems.*  
February 3, 1999. *Measuring the Amplification of Attention.*
- 1999 \*Lesmes, L., Lu, Z.-L., and Sperling, G. Talk presented by L. Lesmes. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 10, 1999. *The Mechanism of Isoluminant Motion Perception is Third-Order Motion.*
- 1999 \*Lu, Z.-L., and Sperling, G. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 10, 1999. *The Amplification Principle in Motion Perception.*
- 1999 \*Sperling, G., and Lu, Z.-L. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 10, 1999. *Unequal Representation of Black and White in Human Vision.*
- 1999 \*Chubb, C., Lu, Z.-L., and Sperling, G. Poster presented by C. Chubb, Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 11, 1999. *Measuring the Nonlinearity Used to Sense High Temporal Frequency Second-Order Motion.*
- 1999 \*Ho, C. E., and Sperling, G. Poster presented by G. Sperling, Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 11, 1999. *Selecting Second and Third-Order Motion Pathways.*
- 1999 †International Conference on Vision and Attention, Centre for Vision Research, York University, June 22 -26, 1999. *Computational Models of Attention.*

- 1999 \*Lu, Z.-L., Lesmes, L., and Sperling, G. Talk presented by Zhong-Lin Lu., The XXII European Conference on Visual Perception (ECVP), Trieste, Italy, August 24, 1999. *Isoluminant Chromatic Motion Perception: Defining the Mechanism.*
- 1999 \*Sperling, G., Blaser, E., and Lu, Z.-L. The XXII European Conference on Visual Perception (ECVP), Trieste, Italy, August 26, 1999. *The Perceptual Amplification of Attention to Color.*
- 1999 †\*Sperling, G., Lesmes, L., and Lu, Z.-L. 31st European Mathematical Psychology Group Meeting, University of Mannheim, Germany, Symposium in Honor of Jan Droesler. August 30, 1999. *A theory of isoluminant chromatic motion perception.*
- 1999 †Symposium to Honor Samuel J. Williamson, New York University, Department of Physics and Center for Neuroscience. September 24, 1999. *Neuromagentism and Short-Term Memory: Auditory and Visual*
- 1999 \*Sperling, G. Psychonomic Society, Los Angeles, CA, November 19, 1999. *Computational Models of Attention Switching.*
- 1999 \*Sperling, G, and Ho, C. E. Psychonomic Society, Los Angeles, CA, November 19, 1999. *Attention and other determinants of perceived direction in ambiguous stimuli.*
- 2000 Sperling, George. Twenty-Fifth Annual Interdisciplinary Conference, Jackson, Wyoming, January 26, 2000 *The Mechanisms of Visual Attention.*
- 2000 \*Tseng, Chia-huei, Gobell, Joetta L., and Sperling, George. (2000). Poster. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 30, 2000. *Sensitization to color: Induced by search, measured by motion.*
- 2000 \*Tse, Chi-Hang, Lu, Zhong-Lin, and Sperling, George. (2000). Poster. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, April 30, 2000. Attending to red and green concurrently in different areas reduces attentional capacity.
- 2000 \*Sperling, George, Kim, Tae-Seong, and Lu, Zhong-Lin. (2000). Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 2, 2000. *Direction-reversal VEPs reveal signatures of first- and second-order motion.*
- 2000 \*Lesmes, Luis A., Lu, Zhong-Lin, and Sperling, George. (2000). Poster. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 4, 2000. *Motion standstill in rapidly moving chromatic displays.*
- 2000 \*Gobell, J. L., Tseng, C.-h., and Sperling, G. (2000). Talk presented by Joetta Gobell. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 5, 2000. *Effect of scene orientation of depth perception: Trapeaoids, windsurfers, runways.*
- 2000 \*Sperling, G., and Ho, C. E. (2000). The XXIII European Conference on Visual Perception (ECVP), Groningen, The Netherlands August 30, 2000. *Third-order versus first-order and second-order motion in ambiguous stimuli: Competition reveals temporal tuning functions, monocular/binocularity, and the role of attention.*
- 2000 \*Lu, Z-L, Lesmes, L. A., and Sperling, G. (2000). The XXIII European Conference on Visual Perception (ECVP), Groningen, The Netherlands August 30, 2000. *Motion standstill perceived from rapidly moving red-green gratings.*
- 2000 †\*Sperling, G. Optical Society of America, Providence, Rhode Island, †\*Symposium: First-, Second-, Third-Order Mechanisms of Pattern and Motion Perception, October 22. *The current status of the three-systems theory of visual motion perception.*



- 2000 †Sperling, G. Optical Society of America, Providence, Rhode Island, Workshop on Chromatic Motion Mechanisms, October 23. *The Mechanism of Isoluminant Red-Green Motion Perception*
- 2000 ††\*Sperling, G. International Congress of Neural Information Processing, Taejun, Korea. Plenary lecture, November 16, 2000. *Neural Computations in Early Vision*
- 2001 Sperling, G. Twenty-Sixth Annual Interdisciplinary Conference, Jackson, Wyoming, January 25, 2001 *Measuring iconic memory with EEG.*
- 2001 Appelbaum, L. G., Lu, Z.-L., and Sperling, G. (2001). Talk presented by C.-h. Tseng. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 1, 2001. *Contrast amplification in a texture discrimination task.*
- 2001 \*Tseng, C.-h., Kim, H., Gobell, J. L., Lu, Z.-L., and Sperling, G. (2001). Talk presented by Chia-huei Tseng. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 2, 2001. *Motion standstill in rapidly moving stereoptic depth displays.*
- 2001 \*Sperling, G., Kim, H., and Lu, Z.-L. (2001). Talk presented by Hyungjun Kim. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 2, 2001. *Is there interocular first-order motion?*
- 2001 \*Kim, H., Lu, Z.-L., and Sperling, G. (2001). Talk presented by Hyungjun Kim. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 3, 2001. *Rivalry motion versus depth motion.*
- 2001 \*Gobell, J. L., Tseng, C.-h., and Sperling, G. (2001). Talk presented by Joetta Gobell. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 4, 2001. *Characterizing the constraints on the spatial distribution of visual attention.*
- 2001 \*Lesmes, L. A., Lu, Z.-L., Doshier, B., Sperling, G., and Posner, C. (2001). Talk presented by Luis Lesmes. Association for Research in Vision and Ophthalmology, Fort Lauderdale, Florida, May 4, 2001. *Intra- and cross-modal activation of attention gates.*
- 2001 †Sperling, G. 8th Joint Symposium on Neural Computation, The Salk Institute, La Jolla, California, May 19, 2001. *What motion standstill tells us about pattern perception.*
- 2001 †Information Science and Technology (DARPA), National Academy of Sciences, Washington, D.C., August 15, 2001. *Visual Attention: Methodology, Findings, Models.*
- 2001 ††\*Sperling, G. International Conference on Cognitive Science, Beijing, China, Plenary lecture, August 27, 2001. *Computational Models of Visual Selective Attention to Space and to Features.*
- 2001 \*Tseng, C.-h., and Sperling, G. Talk presented by Chia-huei Tseng. International Conference on Cognitive Science, Beijing, China August 27, 2001. *Sensitization to color: Induced by instructions, measured by motion*
- 2001 †\*Sperling, G. Optical Society of America, UCI Satellite Meeting, University of California, Irvine, Workshop on Visual Attention, October 13, 2001, *Measuring the trajectory of visual attention.*
- 2001 \*Appelbaum, L. G., Z-L. Lu and G. Sperling. Optical Society of America, UCI Satellite Meeting, University of California, Irvine, Poster, October 14, 2001, *Facilitation of Sub-threshold Contrasts by Means of Texture-Slant.*

- 2001 \*Gobell, J., C.H. Tseng, and G. Sperling. Optical Society of America, UCI Satellite Meeting, University of California, Irvine, Poster, October 14, 2001, *Measuring the spatial resolution of visual attention.*
- 2001 \*Kim, Hyungjun, Zhong-Lin Lu, and George Sperling. Optical Society of America, UCI Satellite Meeting, University of California, Irvine, Poster, October 14, 2001, *Rivalry motion: A cue to cyclopean motion perception.*
- 2001 \*Tseng, Chia-huei, Hyungjun Kim, Joetta L. Gobell, Zhong-Lin Lu, and George Sperling, Optical Society of America, UCI Satellite Meeting, University of California, Irvine, Poster, October 14, 2001, *Revisiting Stereoptic Motion Standstill: Stereoptic Motion Processing Has Lower Temporal Resolution than Shape Processing.*
- 2002 Sperling, G. Twenty-Seventh Annual Interdisciplinary Conference, Jackson, Wyoming, February 5, 2002 *Third-order Motion and Motion Standstill*
- 2002 ††\*Tagung experimentelle arbeitenden Psychologie 44 (TeaP, 44th Conference of Experimental Psychologists), Technische Universitaet, Chemnitz, Chemnitz, Germany, Plenary lecture, March 26, 2002, *The Three Systems Theory of Motion Perception.*
- 2002 Sperling, George. 98th Annual Meeting of the Society of Experimental Psychologists University of California, Berkeley April 6, 2002 *Third-Order Motion.*
- 2002 \*Sperling, George, Lyu, Son-Hee, and Kim, Hyungjun. Vision Sciences Society, Sarasota, Florida, May 11, 2002, *Motion Standstill in First- and Second-order Motion.*
- 2002 \*Ding, Jian, and Sperling, George. Poster, Vision Sciences Society, Sarasota, Florida, May 12, 2002, *A Gain-Control Theory of Binocular Combination.*
- 2002 \*Gobell, Joetta, Tseng, Chia-huei, and Sperling, George. Vision Sciences Society, Sarasota, Florida, May 15, 2002, *Two Variations of a Novel Search Task to Investigate the Nature and Limits of the Distribution of Visual Attention.*
- 2002 †Sperling, George, and Ding, Jian. Ninth Joint Symposium on Neural Computation, California Institute of Technology, Pasadena, California, May 18, 2002, *A Neural Network Theory of Binocular Combination.*
- 2002 Tseng, Chia-huei, and Sperling, George. Poster, Ninth Joint Symposium on Neural Computation, California Institute of Technology, Pasadena, California, May 18, 2002, *Long-Lasting Sensitization to Color Induced by a Search Task.*
- 2002 \*Lu, Zhong-Lin, Lesmes, Louis A., and Sperling, George. XXV European Conference on Visual Perception. Glasgow, Scotland, August 26, *Equiluminance, Sensitive Calibration, Three-Systems Theory, and Isoluminant Chromatic Motion Perception.*
- 2002 \*Sperling, George, Lyu, Son-Hee, and Kim, Hyungjun. XXV European Conference on Visual Perception, Glasgow, Scotland, August 28, *Apparent standstill of rapidly moving first- and second-order motion stimuli*
- 2002 \*Tseng, Chia-huei, Kim, Hyungjun, Gobell, Joetta, L., Lu, Zhong-Lin, and Sperling, George. XXV European Conference on Visual Perception. Glasgow, Scotland, August 25-29, *The Failure of Motion Systems: Motion Standstill in Stereoscopic Depth Displays.*
- 2002 ††\*Optical Society of America, Satellite Meeting, San Francisco, California. October 26, Tillyer Award Lecture, *The Intertwined Mechanisms of Motion Perception and Attention.*

- 2003 Sperling, George. Twenty-Eighth Annual Interdisciplinary Conference, Jackson, Wyoming, February 6, 2003 *Deriving the Properties of Motion Systems from a Motion-Competition Paradigm*
- 2003 \*Gobell, Joetta, Tseng, Chi-huei, and Sperling, George. (Poster presented by Joetta Gobell.) Vision Sciences Society, Sarasota, Florida, May 11, 2003, *Investigating the spatial modulation transfer function of attention.*
- 2003 \*Tseng, Chia-huei, Gobell, Joetta, and Sperling, George. Poster presented by Chia-huei Tseng. Vision Sciences Society, Sarasota, Florida, May 13, 2003, *Attentional sensitization to specific colors.*
- 2003 \*Lesmes, L., Lu, Z.-L., Doshier, B., and Sperling, G. Talk presented by Luis Lesmes. Vision Sciences Society, Sarasota, Florida, May 14, 2003, *Comparing the temporal dynamics of intra- and cross-modal attention switching.*
- 2003 †Sperling, George. 10th Joint Symposium on Neural Computation, UC Irvine, Beckman Center, Irvine, California, May 17, 2003. *Computational networks for visual selective attention.*
- 2003 †Sperling, G. San Miniato International Workshop on Attention, June 12-16, 2003, San Miniato, Italy, June 12, 2003. *Mechanisms of spatial, temporal, and featural attention*
- 2003 San Miniato International Workshop on Attention, June 12-16, 2003, San Miniato, Italy, June 12, 2003. *Computational Networks for Visual Selective Attention.*
- 2003 Gobell, J., Srinivasan, R., and Sperling, G. Poster. Organization for Human Brain Mapping, New York Marriott Marquis Hotel, June 18-22, 2003. *Using 'frequency-tagged' EEG to measure the spatial resolution of attention.*
- 2003 \*Sperling, G., and Ding, J. XXVI European Conference on Visual Perception, Paris, France, September 2, 2003. *A Neurally-Based Computational Theory of Binocular Combination.*
- 2003 \*Gobell, J., Tseng, C.-h., and Sperling, G. XXVI European Conference on Visual Perception, Paris, France, September 5, 2003. *Toward a general model of the spatial distribution of visual attention.*
- 2003 Sperling, G., Wurst, S., and Lu, Z.-L. (2003). Psychonomic Society, Vancouver, BC, Canada, November 6-9, 2003. *Quantifying the Efficiency of Visual Attentional Selection.*
- 2004 Sperling, G. Twenty-Ninth Annual Interdisciplinary Conference, Jackson, Wyoming, February 3, 2004 *Long-Term Persistence of Spatial Attention.*
- 2004 \*Sperling, G., and Hsu, A. Vision Sciences Society, Sarasota, Florida, May 1, 2004, *Revisiting the Lincoln Picture Problem.*
- 2004 Chubb, C., Landy, M., Nam, J.-H., Bindman, D. R., and Sperling, G. (2004). Poster presented by C. Chubb. Vision Sciences Society, Sarasota, Florida, May 4, 2004, *The three dimensions for encoding contrast in simple textures.*
- 2004 †Sperling, G. 11th Joint Symposium on Neural Computation, University of Southern California, Los Angeles, California, May 15, 2004. *A linear systems approach to modeling the spatial distribution of visual attention.*
- 2004 Sperling, G., Gobell, J., and Tseng, C.-h. 3rd Annual Summer Interdisciplinary Conference, Calavese, Italy. June 30, 2004. *Quantifying spatial attention.*

- 2004 \*Sperling, G., Wurst, S. A., and Lu, Z.-L. XXVII European Conference on Visual Perception, Budapest, Hungary, August 23, 2004. *Measuring the efficiency of attentional filtering.*
- 2004 †\*Sperling, G., Gobell, J., and Tseng, C.-H. XXVII European Conference on Visual Perception, Budapest, Hungary, August 24, 2004. *Random-dot stereograms, dipoles, motion standstill.*
- 2004 \*Tseng, C.-h., and Sperling, G. Poster presented by C.-h. Tseng. XXVII European Conference on Visual Perception, Budapest, Hungary, August 26, 2004. *Movement of isoluminant red-green gratings and of random-dot stereo depth gratings is perceived by the same salience motion-perception mechanism.*
- 2005 Sperling, G. Thirtieth Annual Interdisciplinary Conference, Jackson, Wyoming, February 3, 2005. *Cue combination in third-order motion perception.*
- 2005 \*Tseng, C.-h., Vidnyansky, Z., Pappathomas, P., and Sperling, G. Talk presented by C.-h. Tseng. Vision Sciences Society, Sarasota, Florida, May 7, 2005. *Attention-based long-lasting sensitization and suppression of colors.*
- 2005 \*Appelbaum, L. G., Lu, Z.-L., and Sperling, G. Talk presented by L. G. Appelbaum. Vision Sciences Society, Sarasota, Florida, May 10, 2005, *Neuromagnetic responses to first- and second-order motion.*
- 2005 Sperling, G., and Hsieh, I-Hui. 4th Annual Summer Interdisciplinary Conference, Briancon, France, July 27, 2005. *Defining and Using Accurate Confidence Judgments.*
- 2005 \*Sperling, G., Appelbaum, L. G., and Lu, Z.-L. XXVIII European Conference on Visual Perception, A Coruna, Spain, August 24, 2005. *Amplifying the effective perceptual contrast of a grating.*
- 2005 Sperling, G. An Anniversary Conference Celebrating Steve Grossberg@65 and CNS@15, Department of Cognitive and Neural Sciences, Boston University, September 16, 2005. *Some simple neural circuits for brain micro-instructions.*
- 2006 Sperling, G. Thirty-First Annual Interdisciplinary Conference, Jackson, Wyoming, February 9, 2006. *A Neurally Based Theory of Binocular Combination.*
- 2006 Sperling, G. and Ding, J. 102nd Annual Meeting of the Society of Experimental Psychologists University of California, San Diego March 24, 2006 *A Model for Binocular Combination: A neurally-plausible mathematical theory of how the two eyes combine information and some supporting evidence*
- 2006 \*Lin, L., and Sperling, G. Poster presented by Ling Lin. Vision Sciences Society, Sarasota, Florida, May 5, 2006, *Visual Short-Term Memory and Context Memory for Grating Contrast*
- 2006 \*Wong-Drew, S., Chubb, C., and Sperling, G. Poster presented by Stefanie Wong-Drew. Vision Sciences Society, Sarasota, Florida, May 6, 2006, *Attentional Filtering of Dot Intensities in Centroid Estimations.*
- 2006 \*Hsu, A., Scofield, I., and Sperling, G. (2006). Poster presented by Arvin Hsu. Vision Sciences Society, Sarasota, Florida, May 7, 2006, *A Computational Model for the Distribution of Spatial Attention.*
- 2006 \*Scofield, I., Hsu, A., and Sperling, G. (2006). Poster presented by Ian Scofield. Vision Sciences Society, Sarasota, Florida, May 7, 2006, *Complex Spatial Distributions of Attention.*

- 2006 \*Ding, J., Srinivasan, R., and Sperling, G. Poster presented by Jian Ding. Vision Sciences Society, Sarasota, Florida, May 7, 2006, *Flicker Elicits EEG Responses in Two Distinct Cortical Networks Depending on Attention and Flicker Frequency*.
- 2006 \*Sperling, G., and Ding, J. Vision Sciences Society, Sarasota, Florida, May 9, 2006, *An Early Gain-Control Mechanism in Binocular Combination*
- 2006 \*Liu, D., and Sperling, G. Poster presented by Danting Liu. Vision Sciences Society, Sarasota, Florida, May 9, 2006, *Motion Strength is Not What is Summed in the Vector Summation Computation of Plaid Motion*.
- 2006 †Sperling, G., and Ding, J. 12th Joint Symposium on Neural Computation, University of California, San Diego, California, May 20, 2006. *Deriving the Parameters of Binocular Combination*.
- 2006 Sperling, G. and Ding, J. 5th Annual Summer Interdisciplinary Conference, Andalsnes, Norway, July 6, 2006. *A Neurally-Plausible Mathematical Theory of How the Two Eyes Combine Information and some Supporting Evidence*
- 2006 \*Tseng, C.-h., and Sperling, G. Talk presented by Chia-huei Tseng. XXIX European Conference on Visual Perception, Saint Petersburg, Russia, August 21, 2006. *Two distinct attentional mechanisms revealed by the third-order motion paradigm*
- 2006 Sperling, G., and Ding, J. Twelfth Annual Meeting of the Cognitive Science Association for Interdisciplinary Learning, Hood River Hotel, Hood River, Oregon. August 11, 2006. *How the two eyes combine information: A Neurally-Plausible Mathematical Theory and some Supporting Evidence*
- 2006 Sperling, G. Conference on Sino-Western Exchanges in Cognitive Neuroscience, Beijing Normal University, Beijing, China, October 26, 2006. *Deriving and Modeling a Functional Architecture for Visual Attention*.
- 2007 Sperling, G. Thirty-Second Annual Interdisciplinary Conference, Jackson, Wyoming, February 5, 2007. *A Functional Architecture for Visual Attention: Application to Spatial Attention*.
- 2007 Sperling, G. Second International Workshop on Visual Attention Buenos Aires, Argentina, March 15, 2007. *A Functional Architecture for Visual Attention*.
- 2007 Sperling, G., Scofield, I.J., and Hsu, A. T. 6th Annual Summer Interdisciplinary Conference, Kalymnos, Greece. June 30, 2007. *A General Computational Theory of Visual Spatial Attention*.
- 2007 Sperling, G., Scofield, I.J., and Hsu, A. T. 2nd International Congress on Cognition, Emotion, and Motivation. Hammamet, Tunisia October 27, 2007. *A Computational Theory of the Brain Mechanisms of Visual Attention (As a Model for Some Mechanisms of Motivation and Emotion)*
- 2007 Sperling, G. and Ding, J. Institute for Mathematical Behavioral Sciences, Conference on Mathematics and Vision, University of California, Irvine November 9, 2007. *A Computational Model for Binocular Combination: How the two eyes combine information and some supporting evidence*.
- 2008 Sperling, G. Thirty-Third Annual Interdisciplinary Conference, Jackson, Wyoming, February 6, 2008. *Deriving the parameters of attention filters that select and reject visual inputs*.

- 2008 \*Liu, D., and Sperling, G. Poster presented by Danting Liu. Vision Sciences Society, Naples, Florida, May 9, 2008, *The perceived motion direction of fast-moving Type-II plaids*.
- 2008 \*Lin, L., and Sperling, G. Poster presented by Ling Lin. Vision Sciences Society, Naples, Florida, May 10, 2008, *No iconic memory decay nor visual short-term memory decay for grating contrast*.
- 2008 \*Rubin, T. N., Chubb, C. F., Wright, C. E., Wong, S. A., and Sperling, G. Poster presented by Timothy Rubin. Vision Sciences Society, Naples, Florida, May 10, 2008, *Spatiotemporal dynamics of the perception of dot displays*.
- 2008 \*Scofield, I., Chubb, C., and Sperling, G. Poster presented by Charles Chubb. Vision Sciences Society, Naples, Florida, May 10, 2008, *Analyzing band-selective preattentive texture mechanisms*.
- 2008 \*Sperling, G., Scofield, I., and Hsu, A. Vision Sciences Society, Naples, Florida, May 11, 2008, *Computational model of the spatial resolution of visual attention*.
- 2008 \*Drew, S. A., Chubb, C. F., Ehrlich, T., Rubin, T., and Sperling, G. Poster presented by Stefanie Drew. Vision Sciences Society, Naples, Florida, May 13, 2008, *Binary versus graded filters for selectively attending to dots of different contrasts*.
- 2008 Sperling, G., Chubb, C. F., and Drew, S. Seventh Annual Summer Interdisciplinary Conference, Madonna di Campiglio, Italy, July 8, 2008. *Measuring attention filters*.
- 2008 †\*Sperling, G. Japanese Psychological Association, Hokkaido University, Sapporo, Japan, September 19, 2008. *Using Visual-Auditory Synchronization to Measure the Perceptual Time Course of Visual Events*.
- 2008 ††\*Sperling, G. Japanese Psychological Association, Hokkaido University, Sapporo, Japan, September 20, 2008. *The Computational Architecture of Visual Selective Attention*
- 2009 Sperling, G. Thirty-Fourth Annual Interdisciplinary Conference, Jackson, Wyoming, February 12, 2009. *Trapezoidal illusions: Windsurfers and runways*.
- 2009 \*Drew, S. A., Chubb, C., and Sperling, G. Poster presented by Stefanie Drew. Vision Sciences Society, Naples, Florida, May 9, 2009, *Quantifying attention: Attention filtering in centroid estimations*.
- 2009 \*Sperling, G., Gobell, J., and Tseng, C.-h. Poster presented by George Sperling. Vision Sciences Society, Naples, Florida, May 11, 2009, *Trapezoidal illusions: Windsurfers versus runways*.
- 2009 Sperling, G., Gobell, J. L., Tseng, C.-h. Eighth Annual Summer Interdisciplinary Conference, Sarre, Valle d'Aosta, Italy, July 22-27, 2009. *Similar stimuli but different illusions: Windsurfers and runways*.
- 2009 Sperling, G. and Liu, D. T. Talk presented by G. Sperling. XXXII European Conference on Visual Perception, Regensburg, Germany, August 26, 2009. *The vector sum of motion strengths describes the perceived motion direction of first-order plaids*.
- 2010 Sperling, G. Thirty-Fifth Annual Interdisciplinary Conference, Jackson, Wyoming, Modeling the time course of the first few seconds of binocular rivalry.
- 2010 \*Sperling, G. Vision Sciences Society, Naples, Florida, May 7, 2010. *Modeling the Temporal, Spatial, and Featural Processes of Visual Attention*.

- 2010 \*Sperling, G. Vision Sciences Society, Naples, Florida, May 8, 2010. *Ocular and Image Components in Binocular Rivalry: Measuring their strengths and decay rates.*
- 2010 †Sperling, G. 17th Joint Symposium on Neural Computation, University of California, Los Angeles, California, May 22, 2010. *How the Brain Computes the Perceived Motion Direction of Complex Visual Stimuli.*
- 2010 Sperling, G., Liu, D.T., and Lin, L. Ninth Annual Summer Interdisciplinary Conference, Bend, Oregon, USA, July 31, 2010. *Towards a theory of the perception of motion direction. Plaids.*
- 2010 \*Sperling, G., Drew, S. A., and Chubb, C. Talk presented by G. Sperling. XXXIII European Conference on Visual Perception, Lausanne, Switzerland, August 23, 2010. *Measuring the Filters for Selective Attention.*
- 2010 ††\*Sperling, G. XXXIII European Conference on Visual Perception, Lausanne, Switzerland, August 25, 2010. *Motion perception psychophysics: Yesterday, Today, Tomorrow.*
- 2010 Krishnan, L, Kang, A., Sperling, G., Srinivasan, R. Talk presented by L. Krishnan. Society for Neuroscience, San Diego, CA, November 17, 2010. *Fast-action gaming affects the neural strategies underlying selective attention.*
- 2011 Sperling, G. Thirty-Sixth Annual Interdisciplinary Conference, Jackson, Wyoming, January 26, 2011. *Deriving a perceptual motion-processing algorithm from the perceived motion of plaids.*
- 2011 Sperling, G. and Lyu, S.-H. Poster presented by G. Sperling Vision Sciences Society, Naples, Florida, May 11, 2011. *Motion standstill in luminance-modulated and texture-contrast-modulated gratings.*
- 2011 Lyu, S.-H., Lu, Z.-L., and Sperling, G. Poster presented by S.-H Lyu. Vision Sciences Society, Naples, Florida, May 11, 2011. *Cortical areas involved in processing planar stereo motion.*
- 2011 Sperling, G., Scofield, I., Hsu, A. Talk presented by G. Sperling Tenth Annual Summer Interdisciplinary Conference, Balneari Caldes de Boi, Spain, July 10, 2011. *Measuring both the Spatial Resolution and the Cognitive Capacity of Visual Selective Attention.*
- 2011 \*Sperling, G., Scofield, I., Hsu, A. Talk presented by G. Sperling XXXIV European Conference on Visual Perception, Toulouse, France, August 30, 2011. *Measuring the Resolution and Cognitive Capacity of Visual Spatial Attention.*
- 2011 †\*Sperling, G. Fall Vision Meeting, Optical Society of America, University of Washington, Seattle, Washington, September 16, 2011. *Measuring the perceptual strengths of visible and invisible stimuli.*
- 2012 Sperling, G. Thirty-Seventh Annual Interdisciplinary Conference, Breckenridge, Colorado, January 26, 2012. *The computational architecture of visual selective attention: A review.*
- 2012 Yang, H., Sun, P., Chubb, C. and Sperling, G. Poster presented by H. Yang. Thirty-Seventh Annual Interdisciplinary Conference, Breckenridge, Colorado, February 2, 2012. *Deriving the attention filters in two selective attention tasks.*
- 2012 Chubb, C., Sun, P., and Sperling, G. Talk presented by C. Chubb. Vision Sciences Society, Naples, Florida, May 14, 2012. *The perceived motion of moving barber poles.*

- 2012 Sun, P., Chubb, C., and Sperling, G. Poster presented by P. Sun. Vision Sciences Society, Naples, Florida, May 15, 2012. A paradoxical peripheral plaid motion phenomenon.
- 2012 \*Sperling, G., Sun, P., and Chubb, C. 35th European Conference on Visual Perception, Alghero, Italy, September 2, 2012. *Perceived motion of moving barber pole arrays.*
- 2012 \*Sperling, G., Sun, P., and Chubb, C. Psychonomic Society, Minneapolis, Minnesota, November 16, 2012. *A peripherally viewed barber pole illusion reveals a new motion-perception mechanism.*
- 2013 Sperling, G. Thirty-Eighth Annual Interdisciplinary Conference, Jackson, Wyoming, January 30, 2013. *Attention filters.*
- 2013 Yang, H., Sun, P., Chubb, C., and Sperling, G. Poster presented by H. Yang. Vision Sciences Society, Naples, Florida, May 11, 2013. *Complex attention filters for dot contrast derived from a centroid judgment task.*
- 2013 Sperling, G., Sun, P., and Chubb, C. Vision Sciences Society, Naples, Florida, May 13, 2013. *The perceived motion of three varieties of moving barberpole stimuli.*
- 2013 Herrera, C., Sun, P., Groulx, K., Wright, C., Chubb, C., and Sperling, G. Poster presented by C. Herrera. Vision Sciences Society, Naples, Florida, May 14, 2013. *How do the S-, M- and L-cones contribute to motion luminance assessed using minimum motion?*
- 2013 Sun, P., Herrera, C., Chubb, C., Wright, C., and Sperling, G. Poster presented by P. Sun. Vision Sciences Society, Naples, Florida, May 14, 2013. *Attention filters for colors: Isolating single colors.*
- 2013 George Sperling, Sun Peng, Charles E. Wright, and Charles Chubb Talk presented by G. Sperling. Twelfth Annual Summer Interdisciplinary Conference, Cortina d'Ampezzo, Italy, July 26, 2013. *Using centroid judgments to measure attention filtering*
- 2013 ††\*Sperling, G. Fall Vision Meeting, Optical Society of America, School of Optometry, University of Houston, Houston, Texas. October 5, 2013. *Measuring the time course of the information available in brief visual presentations.*
- 2014 Sperling, G. Thirty-Ninth Annual Interdisciplinary Conference, Jackson, Wyoming, February 5, 2014. *A moving-barber-pole illusion and the algorithm that produces it.*
- 2014 †Sperling, G. IMBS Conference on Meaningfulness and Learning Spaces: A tribute to the Work of Jean-Claude Falzague. University of California, Irvine, February 28, 2014. *Formally defining and describing the mechanisms of attention.*
- 2014 Sperling, G, Drew, S., Chubb, C. Wright, E., and Sun, P. 110nd Annual Meeting of the Society of Experimental Psychologists, University of California, Los Angeles, April 11, 2014 *Visual attention filters.*
- 2014 Sperling, G, and Hsu, A. Poster presented by G. Sperling. Vision Sciences Society, Saint Pete's Beach, Florida, May 14, 2014. *Deriving the acuity and the capacity of visual spatial attention.*
- 2014 George Sperling, Sun Peng, Charles E. Wright, and Charles Chubb Talk presented by G. Sperling. Thirteenth Annual Summer Interdisciplinary Conference, Moab, Utah June 28, 2014. *Visual attentional filters for color.*
- 2014 \*Sperling, G., Sun, P., Wright, C. E. and Chubb, C. 36th European Conference on Visual Perception, Belgrade, Serbia, August 2x, 2014. *Visual Attention Filters for Hue and Saturation.*



- 2014 \*Sperling, G., Sun, P., Wright, C. E., and Chubb, C. Paper presented by G. Sperling, Psychonomic Society, Long Beach, California, November 23, 2014. *Measuring Feature-Based Visual Attention Filters.*
- 2014 \*Inverso, M., Chubb, C., Wright, C. E., Sun, P., and Sperling, G. Poster presented by M. Inverso, Psychonomic Society, Long Beach, California, November 23, 2014. *Examining a Single-Saliency-Map Hypothesis for Feature-Based Attention: Centroid Judgments for Orientation and Contrast.*
- 2015 Sperling, G. Fortieth Annual Interdisciplinary Conference, Jackson, Wyoming, February 3, 2015. *Visual attention filters for color.*
- 2015 \*Sperling, G., Sun, P., and Chubb, C. Poster presented by G. Sperling. Vision Sciences Society, Saint Petersburg, Florida, May 17, 2015, *Two Mechanisms Determine the Barber-Pole Illusion.*
- 2015 \*Sun, P., Turbow, B., Chubb, C., Wright, C. E., and Sperling, G. Poster presented by P. Sun, Vision Sciences Society, Saint Petersburg, Florida, *Evidence for the role of Feature-Based-Attention at a very early processing stage.*
- 2015 \*Blair, G., Wright, C. E., Chubb, C., Sun, P., and Sperling, G. Poster presented by G. Blair, Vision Sciences Society, Saint Petersburg, Florida, May 18, 2015, *Disc Size Supports Top-Down, Selective Attention in a Task Requiring Integration across Multiple Target.*
- 2015 \*Inverso, M., \*Sun, P., Chubb, C., Wright, C. E., and Sperling, G. Paper presented by M. Inverso, Vision Sciences Society, Saint Petersburg, Florida, May 19, 2015, *Evidence against global attention filters selective for absolute bar-orientation in human vision.*
- 2015 ††Sperling, G. International Symposium: "New Stages in Information Processing Research", Kaiserslautern, Germany. July 3, 2015, *Deriving computational models for temporal, spatial, and feature attention.*
- 2015 George Sperling, Charles Chubb, Charles E. (Ted) Wright, Peng Sun\*, Matthew Inverso, Pauline Ton, Garrett Blair, and A. Nicole Winter Talk presented by G. Sperling. Fourteenth Annual Summer Interdisciplinary Conference, Mammoth Lakes, CA, July 13, 2015. *Paradoxical anomalies in centroid SSRs.*
- 2015 \*Blair, G., Winter, N. A., Wright, C. E., Chubb, C., and Sperling, G. Paper presented by C. E. Wright, Psychonomic Society, Chicago, IL., November 20, 2015, *Color-size conjunction stimuli support feature-based selection for centroid judgments.*
- 2016 Sperling, G. Forty-First Annual Interdisciplinary Conference, Breckenridge, Colorado, February 3, 2016. *Infomercial for attention filters.*
- 2016 Society of Experimental Psychologists, Columbia University, New York, NY., April 15, 2016. *Visual attention.*
- 2016 \*Winter, A. N., Wright, C. E., Chubb, C., and Sperling, G. Paper presented by A. N. Winter, Vision Sciences Society, Saint Petersburg, Florida, May 15, 2016, *Conjunctive targets are hard in visual search but easy in centroid judgments.*
- 2016 \*Yang, H. J., Sun, P., Chubb, C., and Sperling, G. Poster presented by H. J. Yang, Vision Sciences Society, Saint Petersburg, Florida, May 15, 2016, *Complex attention filters for low contrast items.*
- 2016 \*Inverso, M., Chubb, C., Wright, C. E., Shiffrin, R., and Sperling, G. Paper presented by M. Inverso, Vision Sciences Society, Saint Petersburg, Florida, May 18, 2016, *Comparing efficiencies in estimating centroids and judging numerosity.*

- 2016 Sun, P., Chubb, C., Wright, C., and Sperling, G. Paper presented by G.Sperling. Fifteenth Annual Summer Interdisciplinary Conference, Hotel Oswald, Selva (Val Gardena), Italy, July 3, 2016. *Attention filters for features. New results.*
- 2016 \*Sperling, G., Chu, V., and Sun, P. Paper presented by G. Sperling, Psychonomic Society, Boston, Massachusetts, November 18, 2016, *Multiple salience maps?*
- 2016 Winter, A. N., Chubb, C., Wright, C. E., and Sperling, G. Paper presented by A. N. Winter, Psychonomic Society, Boston, Massachusetts, November 19, 2016, *Target-distractor similarity in feature and conjunctive centroid judgments.*
- 2017 Inverso, M., Chubb, C., Wright, C. E., and Sperling, G. Poster presented by M. Inverso Vision Sciences Society, Saint Petersburg, Florida, May XX, 2017, *Using Angles as Features.*
- 2017 Yang, H., Sun, P., Chubb, C., and Sperling, G. Poster presented by H. Yang Vision Sciences Society, Saint Petersburg, Florida, May 20, 2017, *Does Feature-Based Attention for Grayscale Vary Across Visual Tasks with Identical Stimuli?*
- 2017 Winter, A. N., Wright, C. E., Chubb, C., and Sperling, G. Poster presented by A. N. Winter, Vision Sciences Society, Saint Petersburg, Florida, May 20, 2017, *Conjunctive targets are better than or equal to both constituent feature targets in the centroid paradigm.*

### Invited Lectures at Universities and Institutes

- 1958 Bell Telephone Laboratories, Visual and Acoustics Research Department, August 28, 1958. *Experiments in Vision*.
- 1959 Harvard University, Psychology Colloquium, April 29, 1959. *Visual Information Storage*.
- 1962 Albert Einstein University, College of Medicine. Interdisciplinary Program, Special Lecture, May 8, 1962. *Organization in the Psychology of Vision*.
- 1963 Vassar College, Department of Psychology Colloquium, December 11, 1963. *Short-Term Memory*.
- 1963 Institute for Perception, Soesterberg, The Netherlands, September 13, 1963. *Temporal and Spatial Visual Masking*.
- 1964 Duke University, Department of Psychology Colloquium, April 29, 1964. *Short-Term Memory*.
- 1964 University of Pennsylvania, Department of Psychology Colloquium, April 15, 1964. *Short-Term Memory*.
- 1965 Stanford University, Department of Psychology Colloquium, January 27, 1965. *Processing Visual Information*.
- 1965 Northeastern University, Department of Psychology Colloquium, March 5, 1965. *Processing Visual Information*.
- 1965 Massachusetts Institute of Technology, Psychology Colloquium, May 21, 1965. *Processing Visual Information*.
- 1965 Bell Telephone Laboratories, Murray Hill, NJ, Psychology Seminar, November 8, 1965. *Spatial Localization During Eye Movements and During Object Movements*.
- 1966 Max Planck Institute (Abteilung Reichardt), Tubingen, Germany, January 4, 1966. *Visual Localization During Eye Movements and During Object Movements*.
- 1966 Columbia University, Psychology Colloquium, April 26, 1966. *Models for Short-Term Memory*.
- 1966 City College of New York, Psychology Colloquium, May 10, 1966. *Experiments and a Theory for Short-Term Memory*.
- 1966 Bell Telephone Laboratories, Murray Hill, New Jersey, Psychology Seminar, October 13, 1966. *A Retinal Model for Flicker- and Intensity-Discrimination. (With Man Mohan Sondhi)*.
- 1967 University of Michigan, Mental Health Research Center, Interdisciplinary Colloquium, January 24, 1967. *Models of Short-Term Memory*.
- 1967 University of Michigan, Psychology Colloquium, January 25, 1967. *Movements of the Eye and the Psychology of Movement*.
- 1967 California Institute of Technology, Bio-engineering Department, Colloquium Series, November 22, 1967. *Short-Term Memory Processes in Vision*.
- 1968 University of California, Los Angeles, Regular Psychology Colloquium, January 11, 1968. *Short-Term Memory*.

- 1968 University of California, San Diego, Graduate Psychology Colloquium, February 8, 1968. *Short-Term Auditory Memory.*
- 1968 University of California, Los Angeles, Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, March 1, 1968. *A Model of Vision Based on Psychophysical Experiments and its Relations to Retinal Microstructure.*
- 1968 University of Oregon, Psychology Colloquium, March 8, 1968. *Short-Term Auditory Memory.*
- 1968 University of Rochester, Center for Visual Science, Colloquium, April 17, 1968. *A Model of the Retina Based on Psychophysical Experiments and Its Relations to Retinal Microanatomy.*
- 1968 McMaster University, Department of Psychology Colloquium. April 26, 1968. *Short-Term Auditory Memory.*
- 1968 University of Pennsylvania, Philadelphia, Department of Psychology Colloquium, October 16, 1968. *Deducing Neural Microstructure from Psychophysical Experiments.*
- 1968 Bell Telephone Laboratories, Holmdel N.J. Center 322 Seminar. October 25, 1968. *Model of the Retina.*
- 1968 New York University, Washington Square College, Graduate Psychology Colloquium, November 22, 1968. *Predicting Neural Microstructure from Psychophysical Experiments.*
- 1968 University of California, Santa Barbara, Department of Psychology, Colloquium, December 16, 1968. *Auditory Short-Term Memory.*
- 1969 Rockefeller University, New York, Colloquium, May 2, 1969 *Short-Term Memory. Auditory?*
- 1969 University of Sussex, Falmer-Brighton, Sussex, England, Laboratory of Experimental Psychology Colloquium, October 16, 1969. *Predicting Neural Microanatomy from Psychophysical Experiments.*
- 1969 The National Hospital for Nervous Diseases, Queen Square, London, W.C.1. Brain and Behavior Seminar, October 24, 1969. *Short- and Long-Term Memory in Visual Information Processing.*
- 1969 University College (University of London), Department of Psychology Colloquium, October 27, 1969. *Predicting Neural Microanatomy from Behavioral Observations: An Illustration from Visual Psychophysics.*
- 1969 University of Reading, Reading, England. Department of Psychology Colloquium, October 31, 1969. *Deducing neural microstructure from psychophysical experiments.*
- 1970 Birkbeck College (University of London), Department of Psychology Colloquium, January 27, 1970. *The Structure of Short-Term Memory.*
- 1970 Goldsmiths College (University of London), New Cross, London, Department of Psychology Colloquium, January 27, 1970. *Short-term memory.*
- 1970 University of Edinburgh, Edinburgh, Scotland, Department of Psychology Colloquium, January 29, 1970. *The Structure of Short-Term Memory.*
- 1970 University of Strathclyd, Glasgow, Scotland, Department of Psychology Colloquium, January 30, 1970. *The Structure of Short-Term Memory.*

- 1970 Oxford University, England, Institute of Experimental Psychology Colloquium, February 3, 1970. *The Structure of Short-Term Memory*.
- 1970 University of Cambridge, England, Cambridge Psychological Society Colloquium, February 5, 1970. *The Structure of Short-Term Memory*.
- 1970 University of Cambridge, England, Department of Physiology, Lecture, February 6, 1970. *Visual Contrast Detection*.
- 1970 The City University (Cranwood Street) London, E.C.1, Joint Colloquium, Department of Optics and Laboratory of Psychology, March 11, 1970. *Deducing Retinal Microstructure from Psychophysical Observations*.
- 1971 Stanford University, Department of Psychology Colloquium, January 20, 1971. *Deducing Retinal Microstructure from Psychophysical Observations*.
- 1971 Rockefeller University, New York, Informal Psychology Colloquium, March 11, 1971. *Extremely Rapid Visual Search*.
- 1971 Columbia University, New York, Psychology Colloquium, May 7, 1971. *Extremely Rapid Visual Search*.
- 1971 C. W. Post College, Long Island University, Greenvale, New York, Psychology Colloquium, May 10, 1971. *Visual Search*.
- 1971 University of Western Australia, Perth, Western Australia, Department of Psychology Colloquium, July 13, 1971. *Extremely Rapid Visual Search*.
- 1971 Monash University, Clayton (Melbourne), Victoria, Australia, Department of Psychology, Special Seminars: July 15, 1971. *Extremely Rapid Visual Search*. July 16, 1971. *Neural Models for Perceptual Phenomena*.
- 1971 New School for Social Research, New York, N.Y., Graduate Department of Psychology, Research Colloquium, November 18, 1971. *Processing Visual Information, in Particular, Extremely Rapid Visual Scanning*.
- 1971 Rutgers University, Newark, New Jersey, Institute for Cognitive Studies, Research Colloquium, December 6, 1971. *Processing Visual Information: Extremely Rapid Visual Search*.
- 1972 New York University, Washington Square College, Experimental Psychology Program Seminar, February 4, 1972. *Processing Visual Information. Extremely Rapid Visual Search*.
- 1972 University of Massachusetts, Amherst, Massachusetts, Department of Psychology Colloquium, October 16, 1972. *Extremely Rapid Visual Search*.
- 1972 University of Michigan, Ann Arbor, Michigan, Mental Health Research Institute Colloquium: November 16, 1972. *Extremely Rapid Visual Search*. November 17, 1972. *Deducing Neural Microstructure from Psychophysical Data*.
- 1973 State University of New York, Buffalo. Special Cognitive Psychology Seminars: *Visual Search*. March 28, 1973. *Auditory Memory*. March 29, 1973. *Binocular Vision*. March 30, 1973.
- 1973 Dartmouth College, Hanover, New Hampshire, Psychology Colloquium, February 16, 1973. *Extremely Rapid Visual Search*.
- 1974 McGill University, Montreal, Quebec, Canada, Department of Psychology Colloquium, March 7, 1974. *Processing Visual Information: Extremely Rapid Visual Search*.

- 1974 University of Pennsylvania, Department of Psychology Colloquium. April 30, 1974. *Processing Visual Information: Extremely Rapid Visual Search.*
- 1974 New School for Social Research, New York, New York. Graduate Department of Psychology, Research Seminar, May 1974. *A Physical and a Neural Model of Binocular Vision.*
- 1974 New York University, Washington Square College, Experimental Psychology Program Seminar, November 8, 1974. *Feature-Processing Model of Visual Search.*
- 1975 Georgia Institute of Technology, Atlanta, Georgia, Department of Psychology Colloquium, April 25, 1975. *Extremely Rapid Visual Search.*
- 1975 University of Oregon, Eugene, Oregon, Department of Psychology, June 4, 1975. Informal Seminar: *Models for Multiple-Stable State Phenomena.*  
Colloquium Lecture: *Extremely Rapid Visual Search.*
- 1975 University of Washington, Seattle, Washington, Department of Psychology Colloquium, June 5, 1975. *Extremely Rapid Visual Search.*
- 1976 Temple University, Philadelphia, Pennsylvania, Department of Psychology Colloquium, April 2, 1976. *The Attention Operating Characteristic: Examples from Visual Search.*
- 1976 University of Trondheim, Trondheim, Norway. Department of Psychology Colloquium, August 27, 1976. *Visual Search and Visual Attention.*
- 1976 New York University, New York, N.Y. Experimental Psychology Program Seminar, September 24, 1976. *The Attention Operating Characteristic.*
- 1977 University of Minnesota, Department of Psychology Colloquium, January 6, 1977. *Measuring the Reaction Time of an Unobservable Response - A Shift of Visual Attention.*
- 1977 Northeastern University, Department of Psychology Colloquium, March 8, 1977. *Measuring the Reaction Time of an Unobservable Responses: A Shift of Visual Attention.*
- 1977 Loyola University of Chicago, Department of Psychology Colloquium, April 22, 1977. *Visual Search, Visual Attention, and the Attention Operating Characteristic.*
- 1977 University of California, Berkeley, College of Optometry Colloquium, August 16, 1977. *Visual Search, Visual Attention, and the Attention Operation Characteristic.*
- 1977 Smith-Kettlewell Eye Research Foundation (San Francisco), Institute for Visual Research, Seminar, August 18, 1977. *Model of Binocular Vision.*
- 1977 University of California, San Diego, Department of Psychology Colloquium, September 7, 1977. *Visual Search, Visual Attention, and the Attention Operating Characteristic.*
- 1977 Bell Laboratories, Murray Hill, New Jersey. Two Talks:  
October 11, 1977. *Measuring the Reaction Time of an Unobservable Response: A Shift of Visual Attention.*  
October 12, 1977. *Visual Search, Visual Attention, and the Attention Operating Characteristic.*
- 1977 Columbia University, Department of Psychology, Colloquium, October 14, 1977. *Measuring the Reaction Time of an Unobservable Response: A Shift of Visual Attention.*
- 1977 Bell Laboratories, Piscataway Laboratory, Piscataway, New Jersey. Special Projects Group Meeting (Department 9131), December 1, 1977. *The Time Required to Switch Visual Attention: The Timing of Unobservable Events.*

- 1977 University of Toronto and School of Graduate Studies, Toronto, Ontario Canada.  
Ebbinghaus Luncheon, December 8, 1977. *Measuring the Reaction Time of an Unobservable Response: A Shift of Visual Attention.*  
Department of Psychology Colloquium, December 8, 1977 *Visual Search, Visual Attention, and the Attention Operating Characteristic.*
- 1977 Dalhousie University, Halifax, Nova Scotia, Canada. Department of Psychology Colloquium, December 9, 1977. *Measuring the Reaction Time of an Unobservable Response: A Shift of Visual Attention.*
- 1978 Department of Psychology, University of Oregon, Eugene Oregon, August 10, 1978. *Visual Search, Visual Attention, and the Attention Operating Characteristic.*
- 1978 Courant Institute of Mathematical Sciences, New York University, New York, Mathematical Biology Seminar Series, October 17, 1978. *Three Problems in Mathematical Psychology: Visual Attention, Visual Motion Perception, and Depth Perception.*
- 1978 Stanford University, Department of Psychology Colloquium, December 6, 1978, *Measuring the Reaction-Time Distributions of Unobservable Response Shifts of Visual Attention.*
- 1979 Rockefeller University, New York, N.Y.  
Estes' laboratory Colloquium, February 15, 1979. *A General Theory of Visual Motion Perception.*  
University Colloquium, February 15, 1979. *Measuring the Reaction-Time Distributions of Unobservable Responses: Shifts of Visual Attention.*
- 1979 Yale University, New Haven, Connecticut. Department of Psychology Colloquium, April 25, 1979. *Measuring the Reaction-Time of a Shift of Visual Attention.*
- 1979 Bell Laboratories, Murray Hill, New Jersey, October 22, 1979. *Motion Perception in Computer-Generated Visual Displays.*
- 1979 Bell laboratories, Murray Hill, New Jersey, October 24, 1979. *Bandwidth Requirements for Video Transmission of American Sign Language (ASL) and Finger Spelling.*
- 1980 Bell Laboratories, Holmdel, N.J., Visual Communications Research Department, Research Seminar Series, January 28, 1980. *Low Bandwidth Visual Communication for the Deaf.*
- 1981 Rutgers University, Busch Campus, New Brunswick, N.J., Department of Psychology Colloquium, May 6, 1981. *Time, Distance, and Feature Trade-offs in Visual Apparent Motion.*
- 1981 University of California at San Diego, La Jolla, CA., Salk Institute, August 27, 1981. *American Sign Language: Progress in Defining Video Transmission Requirements, Suggestions for Developing a Written Notational System.*
- 1981 University of Maryland, College Park, MD., Department of Psychology Colloquium, November 4, 1981. *Measuring Attention.*
- 1981 Princeton University, Princeton, N.J., Department of Psychology Colloquium, November 20, 1981. *A Theory of Visual Motion Perception.*
- 1982 Williams Air Force Base, Arizona, The Air Force Human Resources Laboratory, June 16, 1982. *Overview of Research on Human Information Processing at New York University.*
- 1982 Zangwill Club Lecture, Department of Psychology, University of Cambridge, Cambridge, England, September 30, 1982. *A Unified Theory of Attention and Signal Detection.*

- 1982 Columbia University, New York, N.Y., Department of Psychology Colloquium, October 15, 1982. *Image Processing and the Logic of Perception.*
- 1982 Northeastern University, Boston, Massachusetts, Department of Psychology Colloquium, October 21, 1982. *Image Processing of American Sign Language.*
- 1982 Bell Laboratories, Murray Hill, NJ, November 8, 1982. *A Unified Theory of Attention and Signal Detection.*
- 1982 Bell Laboratories, Murray Hill, NJ, November 19, 1982. *Image Processing and the Logic of Perception.*
- 1983 University of Minnesota, Minneapolis, Minnesota, Department of Psychology Colloquium, March 14, 1983. *A Unified Theory of Attention and Signal Detection.*
- 1983 Massachusetts Institute of Technology Cambridge, Massachusetts, Department of Psychology Colloquium, October 14, 1983. *Unified Theory of Attention and Signal Detection.*
- 1983 Carnegie-Mellon University Pittsburgh, Pennsylvania, Computer Science Department, Robotics Institute, Robotics Research Seminar, October 17, 1983. *Image Processing and the Logic of Perception.*
- 1983 Indiana University Bloomington, Indiana, Department of Psychology Colloquium, October 19, 1983. *Unified Theory of Attention and Signal Detection.*
- 1983 University of Illinois, Champaign-Urbana, Illinois, Department of Psychology Colloquia.  
October 20, 1983: Unified Theory of Attention and Signal Detection.  
October 21, 1983: *Image Processing and the Logic of Perception.*
- 1983 University of Rochester, Rochester, New York.  
Center for Visual Sciences Colloquium, November 4, 1983: *Image Processing and the Logic of Perception.*  
Department of Psychology Colloquium, November 4, 1983: *Unified Theory of Attention and Signal Detection.*
- 1983 IBM Thomas J. Watson Research Center, Yorktown Heights, New York, Research Calendar Talk, November 29, 1983. *Image Processing and the Logic of Perception.*
- 1983 RCA Sarnoff Research Laboratories, Princeton, New Jersey Research Seminar Talk, December 16, 1983. *Image Processing and the Logic of Perception.*
- 1984 Stanford University, Stanford, California, Seminar on Issues in Perception, Language, and Cognition, January 16, 1984. *The Logic of Perception.*
- 1984 Stanford University, Stanford, California, Department of Computer Science, Robotics Seminar, February 6, 1984. *How Humans Detect Visual Motion.*
- 1984 Stanford Research Institute (SRI International), Redwood City, California, Joint Colloquium, Artificial Intelligence and Vision Groups, February 8, 1984. *Mechanisms of Human Motion Perception.*
- 1984 Stanford University, Stanford, California, Department of Psychology, Friday Seminar, February 17, 1984. *Attentional Theory of Information in Short-Term Visual Memory*
- 1984 Smith Kettlewell Research Institute San Francisco, California, Brown Bag Luncheon Seminar, February 28, 1984. *Mechanism of Human Short-Range Motion Perception.*



- 1984 Stanford University, Stanford, California, Department of Psychology Colloquium, February 29, 1984. *A Unified Theory of Attention and Signal Detection.*
- 1984 University of California, Santa Cruz, Santa Cruz, California, Departmental Colloquium, Program in Experimental Psychology, March 9 1984. *A Unified Theory of Attention and Signal Detection.*
- 1984 University of California, Berkeley Berkeley, California, Departmental Colloquium, March 16, 1984. *A Unified Theory of Attention and Signal Detection.*
- 1984 NASA Ames Research Center Moffett Field, California, Perception and Cognition Seminar March 22, 1984. *The Mechanism of Human Short-Range Motion Perception.*
- 1984 Stanford University, Stanford, California, Seminar in Applied Cognitive Psychology, April 4, 1984. *Image Processing Studies of American Sign Language*
- 1984 University of California, Los Angeles, California, Department of Psychology Colloquium, April 5, 1984. *A Unified Theory of Attention and Signal Detection.*
- 1984 University of California at San Diego, La Jolla, California, Vision Lab Lunch Talk, April 19, 1984. *The Mechanism of Human Short-Range Motion Perception.*
- 1984 University of California at San Diego, La Jolla, California, Department of Psychology Colloquium, April 19, 1984. *Image Processing and the Logic of Perception.*
- 1984 School of Optometry, University of California, Berkeley Berkeley, California, Oxyopia Colloquium, April 23, 1984. *Mechanisms of Short-Range Motion Perception.*
- 1984 Department of Psychology Colloquium, University of Pennsylvania, Philadelphia, Penn., October 11, 1984. *A Unified Theory of Attention and Signal Detection.*
- 1984 Department of Psychology Colloquium, Cornell University, Ithaca, New York, October 19, 1984. *The Mechanism of Human Short-Range Motion Perception.*
- 1984 Department of Psychology Colloquium, Johns Hopkins University, Baltimore, Maryland October 24, 1984 *The Logic of Perception.*
- 1984 Colloquium, Center for Adaptive Systems, Department of Mathematics, Boston University, Boston, Massachusetts, November 28, 1984. *The Dynamics of Visual Attention.*
- 1985 Cognitive Neuroscience Colloquium, Department of Neurology, Division of Cognitive Sciences, New York Hospital-Cornell Medical Center, New York, New York, March 13, 1985. *Analysis of Movement.*
- 1985 Cognitive Neuroscience Colloquium, Department of Neurology, Division of Cognitive Sciences, New York Hospital-Cornell Medical Center, New York, New York, April 10, 1985. *A Unified Theory of Attention and Signal Detection.*
- 1985 Colloquium, Department of Psychology, Rutgers University, New Brunswick, New Jersey, October 10, 1985. *The Dynamics of Visual Attention.*
- 1985 Psychology Department Colloquium, Harvard University, Cambridge, Massachusetts, October 25, 1985. *The Dynamics of Visual Attention.*
- 1986 Psychology Department Colloquium, Columbia University, New York, New York, November 5, 1986. *The Dynamics of Visual Attention.*
- 1988 Natural Information Processing Seminar, Aiken Computation Laboratory, Harvard University, Cambridge, Massachusetts, February 22, 1988. *Information Processing Stages in Motion and Pattern Perception.*

- 1988 With Karl Gegenfurtner: Cognitive Psychology Area Seminar New York University, New York, NY, November 3, 1988. *Information Transfer in Iconic Memory*.
- 1989 Psychology Lecture Series, Georgetown University, Washington, DC, January 26, 1989. *Measuring Mental Microprocesses: An Historical Account*.
- 1989 Science Colloquium, Air Force Office of Scientific Research, Bolling Air Force Base, Washington, DC. January 27, 1989. *Discovering the Mechanisms of Human Visual Image Motion Processing*.
- 1989 Donald Taylor Memorial Lecture, Psychology Department, Yale University, New Haven, Connecticut, March 1, 1989. *Mechanisms of Human Visual Motion Perception*.
- 1989 New York University, Graduate School of Arts & Science, First Annual Dean's Day and Homecoming, First Lecture. May 6, 1989. *Experimental Science with Humans and Other Quasi-Intelligent Entities*.
- 1989 Department of Speech and Hearing Science, Co-Sponsored by Department of Psychology, Ohio State University, Columbus, Ohio, May 22, 1989. *Information Processing of Visual Language -- ASL*.
- 1989 Human Factors Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio. May 23, 1989. *Theories of Attention*.
- 1989 New York University, Cognitive Science Colloquium Series, December 14, 1989. *Comparison of Perception in the Moving and Stationary Eye*.
- 1990 Special Colloquium, Department of Psychology, University of Washington, Seattle, Washington, March 2, 1990. *Stages of Visual Processing*.
- 1990 Second Attneave Lecture, University of Oregon, Eugene, Oregon, March 5, 1990. *Stages of Visual Processing*.
- 1990 Special Colloquium, Istituto di Neurofisiologia del C.N.R., Pisa, Italy, April 17, 1990. *Linear and nonlinear visual processing*.
- 1990 Distinguished Speaker Seminars in Visual Science, 1990-1991, Sponsored by the Human Performance in Space Laboratory of the Institute for Space and Terrestrial Science and the York Vision Group, York University, Toronto, ONT, Canada, September 14, 1990. *Stages of Visual Processing*.
- 1990 Dartmouth College, Hanover, New Hampshire, Psychology Department, Vision Seminar. October 5, 1990. *Stages of Visual Processing*.
- 1990 Dartmouth College, Hanover, New Hampshire, Psychology Department, Wolfgang Kohler Memorial Lecture, October 5, 1990. *Computational Theories of Attention*.
- 1990 Rutgers University, Newark College of Arts and Sciences Psychology Department Colloquium, October 15, 1990. *Computational Theories of Attention*.
- 1990 Indiana University, Bloomington Indiana, Cognitive Sciences Colloquium, November 1, 1990. *Episodic Theory of the Dynamics of Spatial Attention*.
- 1990 New York University, Cognitive Sciences Colloquium, November 9, 1990. *Episodic Theory of the Dynamics of Spatial Attention*.
- 1991 Department of Psychology Colloquium, University of California, Irvine, Irvine, CA, January 10, 1991. *Visual Preprocessing*.

- 1991 Department of Psychology University of California at San Diego, La Jolla, CA, February 28, 1991. *Mechanisms of Attention*.
- 1991 University of California, Berkeley Berkeley, California, Joint Cognitive Science Colloquium and Oxyopia Colloquium (Optometry School), March 22, 1991. *Visual Preprocessing*.
- 1991 University of California, Berkeley Berkeley, California, Department of Psychology/Cognitive Science Colloquium, March 22, 1991. *The Spatial, Temporal, and Featural Mechanisms of Visual Attention*.
- 1991 Bonny Center for the Neurobiology of Learning and Memory, University of California, Irvine, Irvine, CA, April 8, 1991. *Mechanisms of Visual Attention*.
- 1991 Salk Institute, University of California at San Diego, La Jolla, CA, April 10, 1991. *Visual Preprocessing*.
- 1991 Department of Psychology, University of Florida at Gainesville, April 26, 1991. *Systems and Stages of Visual Processing*.
- 1991 Shanghai Institute of Technical Physics, Shanghai, China, June 17, 1991. *How the Human Visual System Computes Visual Motion* [Host: Prof. Kuang, Ding Bo (Director, SITP); Translators: Dr. Zhang, Ming and Chen, Lulin.]
- 1991 Department of Computer Science, Shanghai Information-Technology Engineers Examination Center, Fudan University, Shanghai, China, June 18, 1991. *Neural Principles of Preprocessing for Human Pattern Recognition*. [Host: Prof. Wu, Lide (Director, SITEEC).]
- 1991 Department of Electronic Science and Technology, Institute of Applied Electronics, East China Normal University, Shanghai, China, June 20, 1991. *Measuring Attention and How the Human Visual System Computes Visual Motion* [Host: Prof. Weng, Moying (Chairman and Director); Translator: Dr. Zhang, Ming.]
- 1991 Department of Psychology, Beijing University, and Institute of Psychology, Chinese Academy of Sciences, Beijing, China, June 25, 1991. [Host: Prof. Jing, Qicheng (Director, Institute of Psychology)]  
 Morning: *The Efficiency of Perception* [Translators: Dr. Zhang, Ken and Prof. Jing, Qicheng.]  
 Afternoon: *Measuring Attention*. [Translator: Luo, Chun-Rong.]
- 1991 Computational Vision Laboratory, Institute of Biophysics, Chinese Academy of Sciences, Beijing, China, June 28, 1991. *First- and Second-Order Motion Perception*. [Host: Prof. Wang Shuo-Rong (Director, Institute of Biophysics); Translator: Prof. Wang, Yun-Jiu (Laboratory Director).]
- 1991 New York University, Cognitive Sciences Colloquium, September 12, 1991. *Is There Attentional Filtering of Items by Feature as Well as by Location?*
- 1992 Center for Adaptive Systems Boston University, February 25, 1992. *Is There Attentional Selection of Items by Feature as Well as by Location?*
- 1992 University of Delaware, Department of Psychology Colloquium, March 4, 1992. *Can Visual Attentional Filter Items by Feature?*
- 1993 University of California, Irvine, Department of Cognitive Sciences, Vision Lunch Series, January 13, 1993. *2nd-Order Motion Perception*.

- 1993 University of California, Irvine, Bren Fellows Program, Learned Societies Luncheon, UCI University Club, March 9, 1993. *Modeling Mental Microprocesses*.
- 1993 University of California, Santa Barbara, First Annual Gottsdanker Memorial Lecture (Department of Psychology). May 27, 1993. *A Theory of Spatial Attention*.
- 1993 Kenneth Craik Club, University of Cambridge, Cambridge, England, October 25, 1993. *Early Visual Processing*.
- 1993 University of California, Berkeley. December 3, 1993. *A Theory of Spatial Attention*.
- 1994 Ohio State University, Columbus, College of Optometry. May 9, 1994:  
Low-Vision Seminar. *Optimal Images and Optimal Perception*.  
Distinguished Speakers Series. *Second-Order Perception*.
- 1994 University of Goettingen, Drittes Physikalisches Institut, University Lecture. July 22, 1994. *Computational Principles of Visual Perceptual Processing*.
- 1994 Max Planck Institute, Tuebingen, Germany. July 25, 1994. *Visual Preprocessing*.
- 1994 University of Pennsylvania, The Institute for Research in Cognitive Science, October 7, 1994. *Computational Principles of Visual Perceptual Processing*.
- 1995 California Institute of Technology, Computational and Neural Systems Group, Beckman Center, January 9, 1995. *Computational Principles of Visual Preprocessing*.
- 1996 Marschack Interdisciplinary Colloquium on Mathematics in the Behavioral Sciences, sponsored by the Anderson School and the Department of Economics, with support from the Anderson School Dean, the School of Public Policy and Social Research Dean, the Blum Kovler Foundation, and the Sidney Stern Memorial Trust. University of California at Los Angeles, Los Angeles, CA, March 1, 1996. *The Economics of Attention, and Other Tales*.
- 1996 Dedication Ceremony for the new Cognitive and Neural Systems Building, Boston University, Boston, Massachusetts, April 19, 1996. *Atoms of the Mind*.
- 1996 Sensation and Perception Lunch Group, University of California, Irvine, January 10, 1996.  
George Sperling and Zhong-Lin Lu: *Attentional Motion*.  
Erik Blaser and George Sperling: *Semantic Motion*.
- 1996 Sensation and Perception Lunch Group, University of California, Irvine, May 29, 1996. *Atoms of the Mind (and) The Goal of Theory in Experimental Psychology*.
- 1996 Sydney Area Vision Group, University of New South Wales, Sydney, Australia, July 19, 1996. *Computational Principles of Early Visual Processing*
- 1996 Department of Psychology, University of Western Sydney, Macarthur, Campbelltown NSW 2560 Australia, July 29, 1996.  
Special joint colloquium: Computer Sciences and Psychology. *Computational Principles of Early Visual Processing*.  
Psychology Colloquium. *Atoms of the Mind: An Historical Overview of Theories of Attention*.
- 1996 Psychology Colloquium, University of New South Wales, Sydney, Australia, July 31, 1996. *Atoms of the Mind: An Historical Overview of Theories of Attention*.
- 1996 Psychology Colloquium, University of Western Australia, Nedlands Australia.  
August 1, 1996. *Atoms of the Mind: An Historical Overview of Theories of Attention*.  
August 2, 1996. Vision Discussion Group: *Visual Preprocessing: Modeling the Initial*

*Stages of Human Visual Perception.*

- 1996 Biology Colloquium, Australian National University, Research School of Biological Sciences, Center for Visual Sciences, Canberra, Australia, August 6, 1996. *Computational Principles of Early Visual Processing: From Adaptation to Attention.*
- 1996 California Institute of Technology, Sloan Center for Theoretical Neurobiology and the Computation and Neural Systems program, Sloan Center Seminar October 7, 1996. *A Functional Architecture for Visual Motion Perception and Spatial Attention.*
- 1996 University of California, Irvine, Department of Psychobiology, Departmental Colloquium, October 10, 1996. *Deriving a Functional Architecture for Visual Motion Perception and Spatial Attention.*
- 1997 Max Planck Institute, Munich, Germany. April 2, 1997. *Computational Review of Early Visual Processing.*
- 1997 Max Planck Institute, Tuebingen, Germany. April 3, 1997. *How to Experimentally Isolate Three Systems of Visual Motion Perception.*
- 1997 University of Houston, Houston, Texas, December 6, 1997.  
College of Optometry, Seminar. *The Orders of Visual Motion--Techniques for Creating Pure Stimuli.*  
Institute of Cognitive Sciences Distinguished Speakers Series. *Deriving a Function Architecture for Visual Motion Perception.*
- 1998 University of Wales (Bangor), Bangor, Gwynedd, Wales, UK, Institute of Cognitive Sciences, September 3, 1998. *Repetition Detection: A Paradigm for Measuring Attentional Filtering.*
- 1999 University of Freiburg, Freiburg, Germany, Departments of Neurology and Psychology, Joint Colloquium, September 1, 1999. *Three systems of Visual Motion Perception: Historical Review, Current Status.*
- 1999 University of California, Irvine, CA. 1999-2000 Distinguished Faculty Lectureship Award for Research, Lecture, University Club, November 15, 1999. *Modeling Human Motion Perception.*
- 2000 University of California, Berkeley, California, Department of Psychology Colloquium, March 3, 2000. *The three systems theory of motion perception: Review and Update.*
- 2000 University of Trier, Germany, Psychology Department Colloquium, September 7, 2000. *Measuring and modeling the dynamics of visual spatial attention.*
- 2000 University of California, Irvine, CA. Department of Cognitive Sciences Colloquium October 9, 2000. *Measuring and modeling the dynamics of visual spatial attention.*
- 2000 Rutgers, The State University, Busch Campus, Piscataway, New Jersey, Center for Cognitive Science Colloquia Series, October 24, 2000. *Measuring and modeling visual attention*
- 2000 The Catholic University of Korea, Puchon, Seoul, S. Korea, Department of Psychology, Special Interdepartmental Colloquium, November 20, 2000. *How the human brain computes motion.*
- 2001 Center for General Education, National Yang Ming University, Taipei, Taiwan, Republic of China.  
September 3 2001. *Computational models of visual attention to space and to features*  
September 4 2001. *The three systems theory of human visual motion perception: Review and Update*

- 2001 Human and Information Science Laboratory, NTT Communication Science Laboratories, NTT Corporation, Atsugi-shi, Kanayama, Japan. September 6, 2001. *The three systems theory of human visual motion perception: Review and Update*
- 2001 Department of Psychology, University of Tokyo, Bunkyo-ku, Tokyo, Japan. September 7, 2001. *The three systems theory of human visual motion perception: Review and Update*
- 2002 Institut fuer Allgemeine Psychologie, Universitaet Leipzig (Seeburgstr. 14-20, 04 103 Leipzig, Germany), March 27, 2002. *Measuring and modeling the trajectory of visual spatial attention.*
- 2002 University of California, Irvine Department of Information and Computer Sciences, Colloquium, June 6, 2002. *How the visual system computes motion.*
- 2002 Department of Psychology, University of Oldenburg Oldenburg, Germany, August 22, 2002. *Visual Attention: Theme and Six Variations.*
- 2002 Department of Psychology Oxford, University, Oxford, England, UK, September 2, 2002. *Motion and Attention.*
- 2002 Cognitive Seminar Series, Department of Psychology, University of California at Los Angeles, Los Angeles, CA, October 4, 2002. *Motion and Attention: A review and update of the three systems theory of motion perception with demonstrations that an attention mechanism--the salience field--is a critical component of third-order motion perception, and illustrations of the use of third-order motion perception to quantitatively measure attentional amplification and to clarify the mechanisms of object perception.*
- 2002 University of Southern California, Neuroscience Colloquium Series, October 9, 2002. *Motion and Attention.*
- 2002 University of California, San Diego, La Jolla, CA, Department of Psychology Colloquium, October 17, 2002. *Motion and Attention: A review and update of the three systems theory of motion perception with demonstrations of an attention mechanism--the salience field-- that is a critical component of third-order motion perception, and illustrations of the use of third-order motion perception to quantitatively measure attentional amplification and to clarify mechanisms of object perception.*
- 2003 University of California, Irvine Institute of Brain Aging and Dementia, Alzheimer's Center Seminar Series, Colloquium, April 21, 2003. *A partial inventory of psychophysical paradigms that have been used to infer neural mechanisms of motion perception and attention.*
- 2003 Pavlov Institute of Physiology, Saint Petersburg, Russia, Colloquium, June 26, 2003. *Mechanisms of Visual Motion Perception.*
- 2003 University of California, Irvine, CA. Institute for Mathematical Behavioral Sciences, Colloquium, October 9, 2003. *How the brain computes visual motion.*
- 2003 Justus-Liebig-Universitaet Otto-Behaghel-Str. 10, 35394 Giessen, Germany, Abteilung Allgemeine Psychologie, Seminar, September 10, 2003. *The three-systems theory of motion perception and how it applies to isoluminant color motion.*
- 2003 New Bulgarian University 21, Montevidoe Str. Sofia 1635, Bulgaria Department of Cognitive Science and Psychology, Seminar, September 15, 2003. *How the brain computes visual motion.*
- 2003 Bulgarian Academy of Sciences, Acad. G. Bonchev Str., Bl. 23, 1113 Sofia, Bulgaria, Institute of Physiology, Seminar, September 16, 2003. *Neural Computations in Visual Selective Attention.*

- 2003 New Bulgarian University 21, Montevideo Str. Sofia 1635, Bulgaria, Department of Cognitive Science and Psychology, Seminar, September 17, 2003. *Spatial attention and short-term memory.*
- 2004 Smith Kettlewell Research Institute San Francisco, California, Colloquium, February 18, 2004. *Quantifying Visual Spatial Attention.*
- 2004 Departments of Psychology and of Neurology, University of Regensburg, Regensburg, Germany, Special Colloquium, June 25, 2004. *Eye Movements, Image Movements, and Attention*
- 2006 George Sperling & Jian Ding University of California, Irvine, CA. Institute for Mathematical Behavioral Sciences, Colloquium, March 2, 2006. *How the two eyes combine information: A neurally-plausible mathematical theory and some supporting evidence*
- 2006 Institute of Cognitive Science, National Cheng-kung University, Tainan City, R.O.C. Colloquium. October 16, 2006. *How the Brain Computes Visual Motion.*
- 2006 Department of Psychology, National Taiwan University, Taipei, R.O.C. Colloquium. October 18, 2006. *The functional architecture of visual attention.*
- 2008 Craik Club, Departments of Psychology and of Physiology, Cambridge University Cambridge, England. Colloquium. July 16, 2008. *A Computational Theory of Visual Attention to Time, Space, and Features.*
- 2008 National Taiwan University, Taipei, R.O.C.  
Vision Group. October 2, 2008. *A Theory of Binocular Combination.*  
Department of Psychology, Colloquium. October 2, 2008. *The functional architecture of visual attention.*
- 2008 University of California, Los Angeles, Vision Group Meeting, October 30, 2008. *A Theory of Binocular Combination.*
- 2009 Cognitive Forum, Department of Psychology, University of California, Los Angeles, Colloquium. January 23, 2009. *How the Brain Computes Visual Motion.*
- 2009 Institute for Mathematical Behavior Sciences University of California, Irvine, Colloquium. November 5, 2009. *Towards a theory of the perception of motion direction. Plaids.*
- 2009 Cognitive Forum, Department of Psychology, University of California, Los Angeles, Colloquium. November 6, 2009. *Towards a theory of the perception of motion direction. Plaids.*
- 2009 Department of Cognitive Sciences, University of California, Irvine, Colloquium. November 23, 2009. *Two and a half experiments in binocular rivalry.*
- 2014 Institute of Mathematical Behavioral Sciences, University of California, Irvine, October 17, 2014. *Filter Processes in Human Visual Attention: Methods, Measurements, Theory.:*
- 2015 Department of Psychology Northeastern University, Boston Massachusetts, Colloquium. May 30, 2015. *Deriving computational models for temporal, spatial, and feature attention.*
- 2015 Department of Psychology, Justus-Liebig-Universitaet, Giessen, Germany, Colloquium, June 29, 2015. *Demos for Academies forum Visual attention as a filtering process that can be efficiently measured quantitatively by centroid methods.*
- 2015 Leibniz Institute for Psychologie Information, ZPID, Trier, Germany, Colloquium Traverensia, July 1, 2015. *Deriving computational models for the brain processes of visual attention.*

- 2016 Craik Club, Departments of Psychology and of Physiology, Cambridge University, Cambridge, England. Colloquium. July 18, 2016. *Attention filters for features.*
- 2016 University of California, Irvine, Irvine, California. Academies Forum. Computational modeling of human visual attention.