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### **EDUCATION**

- 1984 Ph.D., Behavioral Sciences, University of Chicago, Chicago, IL.
- 1973 B.S. (High Honors), Mathematics, Orta Dogu Teknik Universitesi, Ankara, Turkiye.
- 1969 F.Sc., Pre-Engineering, Cadet College Hasanabdal, Hasanabdal, Pakistan.

### **PROFESSIONAL POSITIONS**

- 1998- Professor, Dept. of Vision Science, SUNY College of Optometry, New York, NY.
- 1995-98 Senior Research Scientist, SUNY College of Optometry, New York, NY.
- 1994-95 Vision Research Investigator, The Lighthouse Research Institute, New York, NY.
- 1991-94 Associate Professor, Dept. of Psychology, Columbia University, New York, NY.
- 1985-91 Assistant Professor, Dept. of Psychology, Columbia University, New York, NY.
- 1984-85 Postdoctoral Fellow, AT&T Bell Laboratories, Murray Hill, NJ.
- 1980-84 Research Assistant, Depts. of Behavioral Sciences and Ophthalmology, University of Chicago, Chicago, IL.
- 1979-80 Instructor, Dept. of Psychology, Roosevelt University, Chicago, IL.
- 1975-77 Statistician, Social Psychiatry Study Center, University of Chicago, Chicago, IL.

### **RESEARCH AWARDS**

- 2001-2005 NIH R01 EY13312 "Neural basis of shape from texture".
- 1998-2003 NIH R01-EY07556 "Mechanisms of color detection, induction and adaptation".
- 1993-98 NIH R01-EY07556 "Mechanisms of color detection, induction and adaptation".
- 1988-93 NIH FIRST award EY07556 "Mechanisms of color detection, induction and adaptation".
- 2001 Macquarie University Visiting Research Scholarship "Functional aspects of cortical adaptation". Macquarie University, Sydney, Australia.
- 1999 DAAD A/99/42594 "Color adaptation to complex scenes". Max Planck Institute, Tübingen, Germany.
- 1997-98 SIVR 97-98-093 "Three-dimensional shape and motion distortions".
- 1996-97 SIVR 96-97-075 "Visual processing of object motion".
- 1985-87 Columbia University Biomedical Research Grant "Color vision".

## **BOOKS**

“Three-Dimensional Shape Perception”, Q. Zaidi (ed), Springer-Verlag, New York, (Expected 2002).

## **PUBLICATIONS**

Zaidi, Q. and Griffiths, A.F. Generic assumptions shared by visual perception and imagery. *Brain and Behavioral Sciences* (Submitted).

Li, A. and Zaidi, Q. Three-dimensional shapes conveyed by surface textures (Invited).

Zaidi, Q. and Khang, B. Neural information and perceptual inferences in color constancy. (Invited).

Robilotto, R., Khang, B. and Zaidi, Q. Sensory and physical determinants of perceived achromatic transparency. *Journal of Vision* (Accepted for Publication).

Tsujimura, S. and Zaidi, Q. Similarities between visual processing of relative and absolute motion. *Vision Research* (Submitted).

Khang, B. and Zaidi, Q. Accuracy of color scission for spectral transparencies. *Journal of Vision* (Submitted).

Zaidi, Q. and Li, A. Limitations on shape information provided by texture cues. *Vision Research*, 42, 815-835, 2002.

Khang, B. and Zaidi, Q. Cues and strategies for color constancy: perceptual scission, image junctions, transformational color matching. *Vision Research*, 42, 211-226, 2002.

Shapiro, A., Beere, J. and Zaidi, Q. Time course of adaptation stages in the S cone color system. *Vision Research*, (In press).

Lee, B., Joost, U. and Zaidi, Q. Commentary on "Lichtenberg, G.C.( 1793) Letter to Johann Wolfgang von Goethe on "Farbige Schatten." *Color Research and Application*, (In press).

Li, A. and Zaidi, Q. Veridicality of three-dimensional shape perception predicted from amplitude spectra of natural textures. *J. Opt. Soc. Am.*, A18, 2430-2447, 2001.

Li, A. and Zaidi, Q. Information limitations on the perception of shape from texture. *Vision Research*, 41, 2927-2942, 2001.

Zaidi, Q. Is there a perceptual color space? Review of "Geometric representations of perceptual phenomena", R.D. Luce, M. D'Zmura, D. Hoffman, G.J. Iverson and A.K. Romney (eds.). *Color Research and Application*, 26, 325-328, 2001.

Zaidi, Q. Color constancy in a rough world. *Color Research and Application*, 26, S192-S200, 2001.

Shapiro, A., Beere, J. and Zaidi, Q. Stages of temporal adaptation in the RG color system. *Color Research and Application*, 26, S43-S47, 2001.

Zaidi, Q. and DeBonet, J.S. Motion energy versus position tracking: spatial, temporal, and chromatic parameters. *Vision Research*, 40, 3613-3635, 2000.

Li, A. and Zaidi, Q. The perception of 3D shape from texture is based on patterns of oriented energy. *Vision Research*, 40, 217-242, 2000.

Griffiths, A.F. and Zaidi, Q. Perceptual assumptions and projective distortions in a three-dimensional shape illusion. *Perception*, 29, 171-200, 2000.

Zaidi, Q. Color and brightness induction: From Mach bands to 3-D configurations. In *Color Vision: From Genes to Perception*, Gegenfurtner, K. and Sharpe, L. (eds.), Cambridge University Press, New York, 1999.

Zaidi, Q. Identification of illuminant and object colors: heuristics based algorithms. *J. Opt. Soc. Am.*, A15, 1767-1776, 1998.

Griffiths, A.F. and Zaidi, Q. Rigid objects that appear to bend. *Perception*, 27, 799-802, 1998.

Zaidi, Q., Spehar, B. and DeBonet, J.S. Adaptation to textured chromatic fields. *J. Opt. Soc. Am.*, A15, 23-32, 1998.

Zaidi, Q. Decorrelation of L and M cone signals. *J. Opt. Soc. Am.*, A14, 3430-3431, 1997.

Spehar, B. and Zaidi, Q. Surround effects on the shape of the temporal contrast sensitivity function. *J. Opt. Soc. Am.*, A14, 2517-2525, 1997.

Zaidi, Q., Spehar, B. and Shy, M. Induced effects of backgrounds and foregrounds in three-dimensional configurations: the role of T junctions. *Perception*, 26, 395-408, 1997.

Spehar, B. and Zaidi, Q. New configurational effects on perceived contrast and brightness: Second-order White's effects. *Perception*, 26, 409-418, 1997.

Zaidi, Q., Spehar, B. and DeBonet, J.S. Color constancy in variegated scenes: the role of low-level mechanisms in discounting illumination changes. *J. Opt. Soc. Am.*, A14, 2608-2621, 1997.

DeBonet, J.S. and Zaidi, Q. Comparison between spatial interactions in perceived contrast and perceived brightness. *Vision Research*, 37, 1141-1155, 1997.

Zaidi, Q., DeBonet, J.S. and Spehar, B. Perceived grey-levels in complex configurations. *Recent Progress in Color Science*, Eschbach, R. and Braun, K. (eds.), Imaging Science & Technology, 97-100, (1997).

Greenstein, V., Zaidi, Q., Hood, D., DeBonet, J.S., Spehar, B., Cideciyan, A. and Jacobson, S. Enhanced S Cone Syndrome: receptor and post-receptor analyses. *Vision Research*, 36, 3711-3722, 1996. Reprinted in *OSA Trends in Optics and Photonics Series Vol. 11, Noninvasive Assessment of the Visual System*, Yager, D. (ed.), (Optical Society of America, Washington, DC 1997).

Spehar, B., DeBonet, J.S. and Zaidi, Q. Brightness induction from uniform and complex surrounds: a general model. *Vision Research*, 36, 1893-1906, 1996.

Greenstein, V., Halevy, D., Zaidi, Q. and Ritch, R. Chromatic and achromatic system deficits in open-angle glaucoma. *Vision Research*, 36, 621-629, 1996. Reprinted in *OSA Trends in Optics and Photonics Series Vol. 11, Noninvasive Assessment of the Visual System*, Yager, D. (ed.), (Optical Society of America, Washington, DC 1997).

Sachtler, W. and Zaidi, Q. Visual processing of motion boundaries. *Vision Research*, 35, 807-826, 1995.

Zaidi, Q. Commentary on "Schrodinger, E. (1925) Uber der Verhaltnis der Vierfarben zur Dreifarbentheorie" *Color Research and Application*, 19, 37-40, 1994.

Gegenfurtner, K., Kiper, D., Beusmans, J., Carandini, M., Zaidi, Q. and Movshon, J. A. Chromatic properties of neurons in macaque MT. *Visual Neuroscience*, 11, 455-466, 1994.

Zaidi, Q. and Shapiro, A. Adaptive orthogonalization of opponent-color signals. *Biological Cybernetics*, 69, 415-428, 1993.

Greenstein, V., Shapiro, A., Hood, D and Zaidi, Q. Chromatic and luminance sensitivity in diabetes and glaucoma. *J. Opt. Soc. Am.*, A10, 1785-1791, 1993.

Sachtler, W. and Zaidi, Q. The effect of spatial configuration on motion aftereffects. *J. Opt. Soc. Am.*, A10, 1433-1449, 1993.

Zaidi, Q. and Zipser, N. Induced contrast from radial patterns. *Vision Research*, 33, 1281-1286, 1993.

Zaidi, Q. and Halevy, D. Visual mechanisms that signal the direction of color changes. *Vision Research*, 33, 1037-1051, 1993.

Zaidi, Q. Commentary on "Maxwell, J. C. (1860) On the theory of compound colours and the relations of the colours of the spectrum" *Color Research and Application*, 18, 270-272, 1993.

Shapiro, A. and Zaidi, Q. The effect of prolonged temporal modulation on the differential response of color mechanisms. *Vision Research*, 32, 2065-2076, 1992.

Zaidi, Q., Yoshimi, B., Flanigan, N. and Canova, A. Lateral interactions within color mechanisms in simultaneous induced contrast. *Vision Research*, 32, 1695-1707, 1992.

Greenstein, V., Shapiro, A., Zaidi, Q. and Hood, D. Psychophysical evidence for post-receptoral sensitivity loss in diabetics. *Invest. Ophthal. and Vis. Sc.*, 33, 2781-2790, 1992.

Sachtler, W. and Zaidi, Q. Chromatic and luminance signals in visual memory. *J. Opt. Soc. Am.*, A9, 877-894, 1992.

Zaidi, Q., Shapiro, A. and Hood, D. The effect of adaptation on the differential sensitivity of the S-cone color system. *Vision Research*, 32, 1297-1318, 1992.

Zaidi, Q. Parallel and serial connections between human color mechanisms. In *Applications of Parallel Processing in Vision*, J. Brannan (Ed.), Elsevier, Amsterdam, 227-259, 1992.

Zaidi, Q. and Sachtler, W. Motion adaptation from surrounding stimuli. *Perception*, 20, 703-714, 1991.

Zaidi, Q., Yoshimi, B. and Flanigan, J. The influence of shape and perimeter-length on induced color contrast. *J. Opt. Soc. Am.*, A8, 1810-1817, 1991.

Zaidi, Q. and Halevy, D. Chromatic mechanisms beyond linear opponency. In *From Pigments to Perception: Advances in Understanding Visual Processes*, A. Valberg and B. Lee (Eds.), Plenum Press, London, 337-348, 1991.

Zaidi, Q. Apparent brightness in complex displays: A reply to Moulden and Kingdom. *Vision Research*, 30, 1253-1255, 1990.

Zaidi, Q. Local and distal factors in visual grating induction. *Vision Research*, 29, 691-697, 1989.

Zaidi, Q., Pokorny, J. and Smith, V. Sources of individual differences in anomaloscope equations for tritan defects. *Clinical Vision Sciences*, 4, 89-94, 1989.

Zaidi, Q. and Pokorny, J. Appearance of pulsed infrared light: second harmonic generation in the eye. *Applied Optics*, 27, 1064-1068, 1988.

Zaidi, Q. Adaptation and color matching. *Vision Research*, 26, 1925-1938, 1986.

Krauskopf, J., Zaidi, Q. and Mandler, M.B. Mechanisms of simultaneous color induction. *J. Opt. Soc. Am.*, A3, 1752-1757, 1986.

- Krauskopf, J. and Zaidi, Q. Induced desensitization. *Vision Research*, 26, 759-762, 1986.
- Smith, V., Pokorny, J. and Zaidi, Q. How do sets of color matching functions differ? In *Colour Vision: Physiology and Psychophysics*, J. Mollon and L.T. Sharpe (Eds.), Academic Press Ltd., London, 1983.
- Pokorny, J., Smith, V., Burns S., Elsner, A. and Zaidi, Q. Modeling Blue-Yellow Opponency, *Proceedings of the Fourth International Congress, AIC*. M. Richter (Ed.), Berlin, 1981.

## CONFERENCE PRESENTATIONS & ABSTRACTS

- Zaidi, Q. and Li, A. Conditions where motion parallax supplements shape-from-texture. *European Conference on Visual Perception, 2002 (Submitted)*.
- Li, A. and Zaidi, Q. Isotropic textures signal distance not 3-D shape. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Tsujimura, S. and Zaidi, Q. Is induced motion due to position illusions? *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Griffiths, A. F. and Zaidi, Q. Perceptual asymmetry in solid shape perception. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Khang, B. and Zaidi, Q. Illuminant color perception of spectrally filtered spotlights. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Smithson, H. and Zaidi, Q. Partitions of object colour space under illuminant and background changes. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Robilotto, R. and Zaidi, Q. Perceived transparency across dissimilar backgrounds. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Clifford, C.W.G., Spehar, B., Solomon, S.G., Martin, P. R. and Zaidi, Q. Colour-luminance interactions in human orientation perception. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Baldwin, L.A., Shapiro, A.G., and Zaidi, Q. Time course of L-M system adaptation to simple and complex fields. *Vision Sciences Society, Annual Meeting 2002 (Scheduled)*.
- Zaidi, Q. and Khang, B. Color constancy for transparencies and materials. *European Conference on Visual Perception, 2001 (Perception, 30 (Sup), 8, 2000)*.
- Li, A. and Zaidi, Q. A new observer model for shape from texture. *European Conference on Visual Perception, 2001 (Perception, 30 (Sup), 8, 2001)*.
- Li, A. and Zaidi, Q. Phase spectra are irrelevant in 3D shape from natural textures. *Vision Sciences Society, Annual Meeting 2001*.
- Tsujimura, S. and Zaidi, Q. Higher sensitivity for relative motion is due to position tracking. *Vision Sciences Society, Annual Meeting 2001*.
- Griffiths, A. F. and Zaidi, Q. Looking through Ames' window. *Vision Sciences Society, Annual Meeting 2001*.
- Khang, B. and Zaidi, Q. Shifts in inferred colors of transparent layers. *Vision Sciences Society, Annual Meeting 2001*.
- Robilotto, R., Khang, B. and Zaidi, Q. Perceived transparency: trade-offs between reflectance and transmittance. *Vision Sciences Society, Annual Meeting 2001*.

Spehar, B. and Zaidi, Q. Chromatic and brightness crispening. European Conference on Visual Perception, 2000. (*Perception*, 29 (Sup), 15, 2000).

Zaidi, Q. and Li, A. Neural model of shape from texture: developable surfaces. Association for Research in Vision and Ophthalmology, Annual Meeting 2000. (*Inv. Opth. & Vis. Sc.*, 41, S219, 2000).

Li, A. and Zaidi, Q. Roles of frequency and orientation modulation in shape from texture. Association for Research in Vision and Ophthalmology, Annual Meeting 2000. (*Inv. Opth. & Vis. Sc.*, 41, S317, 2000).

Griffiths, A. F. and Zaidi, Q. Perceived shapes and poses of iso-perspectival solids. Association for Research in Vision and Ophthalmology, Annual Meeting 2000. (*Inv. Opth. & Vis. Sc.*, 41, S722, 2000).

Khang, B. and Zaidi, Q. Tests of color scission by identification of transparent overlays. Association for Research in Vision and Ophthalmology, Annual Meeting 2000. (*Inv. Opth. & Vis. Sc.*, 41, S239, 2000).

Robilotto, R. and Zaidi, Q. Performance based lightness constancy: crumpled 3D objects. Association for Research in Vision and Ophthalmology, Annual Meeting 2000. (*Inv. Opth. & Vis. Sc.*, 41, S227, 2000).

Shapiro, A., Beere, J. and Zaidi, Q. Time course of higher-order adaptation in the S-(L+M) color system. Association for Research in Vision and Ophthalmology, Annual Meeting 2000. (*Inv. Opth. & Vis. Sc.*, 41, S809, 2000).

Spehar, B. and Zaidi, Q. Contrast sensitivity in uniform and complex surrounds. Symposium on long range interactions. Optical Society of America, Annual Meeting 1999 (Conference Program, 62).

Li, A. and Zaidi, Q. Which natural textures convey shape? European Conference on Visual Perception, 1999 (*Perception*, 28 (Sup), 14, 1999).

Shapiro, A., Beere, J. and Zaidi, Q. Temporal properties of adaptation stages in the S-(L+M) color system. International Color Vision Society, XVth Symposium, July 1999. (*ICVS, XVth Symposium Abstracts*, P15, 1999).

Zaidi, Q. Color representation by cortical neurons. Association for Research in Vision and Ophthalmology, Annual Meeting 1999. (*Inv. Opth. & Vis. Sc.*, 40, S177, 1999).

Li, A. and Zaidi, Q. Shape from natural textures. Association for Research in Vision and Ophthalmology, Annual Meeting 1999. (*Inv. Opth. & Vis. Sc.*, 40, S398, 1999).

Morikawa, K. and Zaidi, Q. Minimum velocity limits for motion energy detection. Association for Research in Vision and Ophthalmology, Annual Meeting 1999. (*Inv. Opth. & Vis. Sc.*, 40, S191, 1999).

Li, Andrea and Zaidi, Q. Oriented flows used in extracting shape from texture. Optical Society of America, Annual Meeting 1998 (*OPN Optics & Photopic News*, 9 (Special Issue), 92, 1998).

Zaidi, Q. A fresh look at color constancy: heuristics based algorithms. European Conference on Visual Perception, 1998 (*Perception*, 27 (Sup), 42, 1998).

Li, Andrea and Zaidi, Q. Oriented energy analysis of shape from texture. European Conference on Visual Perception, 1998 (*Perception*, 27 (Sup), 40, 1998).

Griffiths, A.F. and Zaidi, Q. Perceptual assumptions and projective distortions in a three-dimensional shape illusion. European Conference on Visual Perception, 1998 (Perception, 27 (Sup), 112, 1998).

Zaidi, Q. Color constancy in a rough world. Association for Research in Vision and Ophthalmology, Annual Meeting 1998. (Inv. Ophth. & Vis. Sc., 39, S444, 1998).

Li, Andrea and Zaidi, Q. Shape from one- and two-dimensional textures. Association for Research in Vision and Ophthalmology, Annual Meeting 1998. (Inv. Ophth. & Vis. Sc., 39, S852, 1998).

Griffiths, A.F. and Zaidi, Q. A model for three-dimensional shape and tilt perception. Association for Research in Vision and Ophthalmology, Annual Meeting 1998. (Inv. Ophth. & Vis. Sc., 39, S854, 1998).

Zaidi, Q. Simultaneous estimation of illuminant and object colors. Association for Research in Vision and Ophthalmology, Annual Meeting 1997. (Inv. Ophth. & Vis. Sc., 38, S476, 1997).

Li, Andrea and Zaidi, Q. Image enhancement of colored images. Association for Research in Vision and Ophthalmology, Annual Meeting 1997. (Inv. Ophth. & Vis. Sc., 38, S254, 1997).

Griffiths, A.F. and Zaidi, Q. Three-dimensional illusions: projections and priors. Association for Research in Vision and Ophthalmology, Annual Meeting 1997. (Inv. Ophth. & Vis. Sc., 38, S1001, 1997).

Zaidi, Q., Spehar, B. and DeBonet, J.S. Adaptation to variegated scenes and color constancy. European Conference on Visual Perception, 1996. (Perception, 25 (Sup), 27, 1996).

Zaidi, Q., Spehar, B. and DeBonet, J.S. Chromatic adaptation to variegated fields. Association for Research in Vision and Ophthalmology, Annual Meeting 1996. (Inv. Ophth. & Vis. Sc., 37, 4, 1996).

DeBonet, J.S. and Zaidi, Q. Induced contrast and brightness in dynamic random noise. Association for Research in Vision and Ophthalmology, Annual Meeting 1996. (Inv. Ophth. & Vis. Sc., 37, S1072, 1996).

Spehar, B. and Zaidi, Q. Effects of simple and complex surrounds on temporal contrast sensitivity. Association for Research in Vision and Ophthalmology, Annual Meeting 1996. (Inv. Ophth. & Vis. Sc., 37, S521, 1996).

Zaidi, Q., DeBonet, J.S. and Spehar, B. Detection of illumination changes in variegated scenes. European Conference on Visual Perception, 1995. (Perception, 24 (Sup), 12, 1995).

DeBonet, J.S. and Zaidi, Q. Temporal and spatial frequency analysis of motion-energy and feature-tracking. European Conference on Visual Perception, 1995. (Perception, 24 (Sup), 101, 1995).

Spehar, B., DeBonet, J.S. and Zaidi, Q. Spatial summation of brightness induction. European Conference on Visual Perception, 1995. (Perception, 24, (Sup), 37, 1995).

Zaidi, Q., DeBonet, J.S. and Spehar, B. Perceived grey-levels in complex configurations. Third Annual IS&T/SID Color Imaging Conference, 1995 (Proceedings of the Third Annual IS&T/SID Color Imaging Conference, 14-17, 1995).

Zaidi, Q., DeBonet, J.S. and Spehar, B. Detection of illumination changes in variegated scenes. Association for Research in Vision and Ophthalmology, Annual Meeting 1995. (Inv. Ophth. & Vis. Sc., 36, 2928, 1995).

DeBonet, J.S. and Zaidi, Q. Temporal and spatial frequency analysis of motion-energy and feature-tracking. Association for Research in Vision and Ophthalmology, Annual Meeting 1995. (Inv. Ophth. & Vis. Sc., 36, 253, 1995).

Spehar, B., DeBonet, J.S. and Zaidi, Q. Spatial summation of brightness induction. Association for Research in Vision and Ophthalmology, Annual Meeting 1995. (Inv. Ophth. & Vis. Sc., 36, 2157, 1995).

Greenstein, V., Hood, D., Zaidi, Q., Spehar, B., DeBonet, J.S., Cideciyan, A. and Jacobson, S. Enhanced S cone syndrome: evidence for relatively more S than L and M cones. Association for Research in Vision and Ophthalmology, Annual Meeting 1995. (Inv. Ophth. & Vis. Sc., 36, 2054, 1995).

Zaidi, Q., DeBonet, J.S. and Spehar, B. Perceived grey-levels in complex configurations. Inter Society Color Council, Annual Meeting 1995. (ISCC 64th Annual Meeting, 39-42, 1995).

Zaidi, Q. and DeBonet, J.S. Contribution of chromatic signals to motion-energy and feature-tracking. Optical Society of America, Annual Meeting 1994, (Optics and Photonic News, 5 (suppl), 99, 1994).

Sachtler, W.L., Han, J. and Zaidi, Q. Adaptation to motion boundaries. Optical Society of America, Annual Meeting 1994, (Optics and Photonic News, 5 (suppl), 99, 1994).

Zaidi, Q. and Sachtler, W.L. Visual processing of motion boundaries. Association for Research in Vision and Ophthalmology, Annual Meeting 1994. (Inv. Ophth. & Vis. Sc., 35, 2076, 1994).

DeBonet, J.S. and Zaidi, Q. Weighted spatial integration of induced contrast-contrast. Association for Research in Vision and Ophthalmology, Annual Meeting 1994. (Inv. Ophth. & Vis. Sc., 35, 1667, 1994).

Zaidi, Q. Contrast sensitivity for input distributions. Optical Society of America, Annual Meeting 1993. (Opt. Soc. Am. Tech. Digest Series, 16, 268, 1993).

Sachtler, W. and Zaidi, Q. Visual processing of simple and multiple motion. Optical Society of America, Annual Meeting 1993. (Opt. Soc. Am. Tech. Digest Series, 16, 273, 1993).

Zaidi, Q. Adaptation processes governed by the distribution of inputs. European Conference on Visual Perception, 1993. (Perception, 22, (Sup), 62, 1993).

Zaidi, Q. and Shapiro, A. Functional models of adaptation to color modulation. Association for Research in Vision and Ophthalmology, Annual Meeting 1993. (Inv. Ophth. & Vis. Sc., 34, 744, 1993).

Zipser, N. and Zaidi, Q. Temporal properties of brightness induction. Association for Research in Vision and Ophthalmology, Annual Meeting 1993. (Inv. Ophth. & Vis. Sc., 34, 765, 1993).

Greenstein, V., Halevy, D., Ritch, R. and Zaidi, Q. Opponent and achromatic system deficits in pigmentary vs. juvenile open-angle glaucoma. Association for Research in Vision and Ophthalmology, Annual Meeting 1993. (Inv. Ophth. & Vis. Sc., 34, 1267, 1993).

Sachtler, W. and Zaidi, Q. Measurements and models of the motion after-effect. Optical Society of America, Annual Meeting 1992. (Opt. Soc. Am. Tech. Digest Series, 23, 216, 1992).

Shapiro, A. and Zaidi, Q. Prolonged temporal modulation and the interaction between color mechanisms. Optical Society of America, Annual Meeting 1992. (Opt. Soc. Am. Tech. Digest Series, 23, 51, 1992).

Zaidi, Q. and Shapiro, A. Adaptive decorrelation between opponent-color mechanisms. European Conference on Visual Perception, 1992. (Perception, 21 (Sup), 62, 1992).

Greenstein, V., Ritch, R., Shapiro, A., Zaidi, Q. and Hood, D. The effects of glaucoma on cone pathways. Association for Research in Vision and Ophthalmology, Annual Meeting 1992. ( *Inv. Opth. & Vis. Sc.*, 33, 1383, 1992)

Zaidi, Q. and Shapiro, A. Combination of signals from opponent color mechanisms. *Advances in Color Vision*, Optical Society of America, Topical Meeting 1992. ( *Advances in Color Vision Technical Digest*, Vol 4, 201-203, 1992)

Movshon, J. A., Kiper, D., Beusmans, J., Gegenfurtner, K., Zaidi, Q., Carandini, M. Chromatic properties of neurons in macaque MT. Society for Neuroscience, Annual Meeting 1991. ( *Soc. Neurosci. Abstr.*, Vol 17, Part 1, 524, 1991)

Zaidi, Q. and Halevy, D. Mechanisms that signal color changes-II. Association for Research in Vision and Ophthalmology, Annual Meeting 1991. ( *Inv. Opth. & Vis. Sc.*, 32, 1214, 1991)

Sachtler, W. L. and Zaidi, Q. Efficiency of chromatic and luminance signals in temporal discrimination. Association for Research in Vision and Ophthalmology, Annual Meeting 1991. ( *Inv. Opth. & Vis. Sc.*, 32, 1213, 1991)

Shapiro, A., and Zaidi, Q. The effects of prolonged temporal modulation on the response of color mechanisms. Association for Research in Vision and Ophthalmology, Annual Meeting 1991. ( *Inv. Opth. & Vis. Sc.*, 32, 842, 1991)

Greenstein, V., Shapiro, A., Carr, R., Harooni, M., Hood, D., Ritch, R., and Zaidi, Q. Chromatic and achromatic threshold changes associated with ocular disorders. Association for Research in Vision and Ophthalmology, Annual Meeting 1991. ( *Inv. Opth. & Vis. Sc.*, 32, 1231, 1991)

Zaidi, Q., Yoshimi, B. and Flanigan, N. Tests of spatial additivity for induced color contrast. Optical Society of America, Annual Meeting, 1990. ( *Opt. Soc. Am. Tech. Digest Series*, 15, 206, 1990).

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Shapiro, A., Zaidi, Q., and Hood, D. Adaptation in the red-green (L-M) color system. Association for Research in Vision and Ophthalmology, Annual Meeting 1990. ( *Inv. Opth. & Vis. Sc.*, 31, 262, 1990)

Yoshimi, B., and Zaidi, Q. The effect of shape, perimeter and area on induced color contrast. Association for Research in Vision and Ophthalmology, Annual Meeting 1990. ( *Inv. Opth. & Vis. Sc.*, 31, 264, 1990)

Greenstein, V., Thomas, S., Shapiro, A., Zaidi, Q., and Hood, D. A comparison of techniques for measuring S cone sensitivity in diabetics. Association for Research in Vision and Ophthalmology, Annual Meeting 1990. ( *Inv. Opth. & Vis. Sc.*, 31, 423, 1990)

Sachtler, W. L. and Zaidi, Q. Motion detection and the role of motion boundaries. Association for Research in Vision and Ophthalmology, Annual Meeting 1990. ( *Inv. Opth. & Vis. Sc.*, 31, 521, 1990)

Zaidi, Q., Hood, D. and Shapiro, A. The time course of sensitivity change in S-cone color mechanisms. Association for Research in Vision and Ophthalmology, Annual Meeting, 1989. ( *Inv. Opth. & Vis. Sc.*, 30, 221, 1989).

Zaidi, Q. and Hood, D. Sensitivity changes in color mechanisms. Optical Society of America, Annual Meeting, 1988. ( *Opt. Soc. Am. Technical Digest Series Vol. 11*, 67, 1988).

Zaidi, Q. and Skorupski, A. Spatial weighting function for induced color contrast. Optical Society of America, Annual Meeting, 1988. (Opt. Soc. Am. Technical Digest Series Vol. 11, 104, 1988).

Zaidi, Q. and Hood, D. Sites of instantaneous nonlinearities in the visual system. Association for Research in Vision and Ophthalmology, Annual Meeting, 1988. (Inv. Opth. & Vis. Sc., 29, 163, 1988).

Zaidi, Q. Nonlinear color mechanisms: a new model and a new method. Optical Society of America, Annual Meeting, 1987. (J. Opt. Soc. Am. A 4(13), 107, 1987).

Zaidi, Q. Does shape affect color induction? Optical Society of America, Annual Meeting, 1987. (J. Opt. Soc. Am. A 4(13), 52, 1987).

Zaidi, Q. & Krauskopf, J. Spatial interactions in color induction. Association for Research in Vision and Ophthalmology, Annual Meeting, 1987. (Inv. Opth. & Vis. Sc., 28, 214, 1987).

Zaidi, Q. and Krauskopf, J. Color induction in cardinal and intermediate directions. Association for Research in Vision and Ophthalmology, Annual Meeting, 1986. (Inv. Opth. & Vis. Sc., 27, 73, 1986).

Krauskopf, J. and Zaidi, Q. Spatial factors in color induction. Association for Research in Vision and Ophthalmology, Annual Meeting, 1986. (Inv. Opth. & Vis. Sc., 27, 291, 1986).

Krauskopf, J. and Zaidi, Q. New measurements of color induction. European Conference on Visual Perception, 1986. (Perception, 15, A28, 1986).

Zaidi, Q. Color Contrast. Eleventh Annual Interdisciplinary Conference, Whistler, BC, 1986.

Krauskopf, J. and Zaidi, Q. Spatial factors in desensitization along cardinal directions of color space. Association for Research in Vision and Ophthalmology, Annual Meeting, 1985. (Inv. Opth. & Vis. Sc., 26, 206, 1985).

Zaidi, Q. and Pokorny, J. Failures of metamerism at short-wavelengths, Optical Society of America, Annual Meeting, 1983. (J. Opt. Soc. Am., 73, 1902, 1983).

Zaidi, Q., Pokorny, J. and Smith, V. Sources of variation in blue-green equations. Optical Society of America, Annual Meeting, 1982. (J. Opt. Soc. Am., 72, 1727, 1982).

## **INVITED TALKS**

Cues and strategies for color constancy. OSA/UCI Color Workshop, Irvine, CA. October 2001.

Physical information and human perception. Department of Physics, Temple University, Philadelphia, PA, September 2001 (Scheduled).

Towards a neural basis of shape from texture. Department of Neurobiology, Duke University, Durham, NC, June 2001.

How surface textures convey 3-D shape. Cognition and Perception Area Seminar, Department of Psychology, New York University, New York, NY, April 2001.

How surface textures convey 3-D shape. Department of Psychology, University of Melbourne, Melbourne, Australia, March 2001.

Cues and strategies for color constancy. Optometry and Vision Sciences, University of Melbourne, Melbourne, Australia, March 2001.

How surface textures convey 3-D shape. Macquarie Center for Cognitive Science, Macquarie University, Sydney, Australia, February 2001.

Cues and strategies for color constancy. Vision Discussion Group, University of Sydney, Sydney, Australia, February 2001.

Towards a neural model of shape from texture. Research School of Biological Sciences, Institute of Advanced Studies, Australian National University, Canberra, Australia, February 2001.

Functional benefits of color adaptation. Australian Neuroscience Society, Annual Meeting, Brisbane, Australia, January 2001.

Towards a neural model of shape from texture. Neural Net/Vision Seminar, Brown University, Providence, RI. October 2000.

Chromatic motion-energy mechanisms. Optical Society of America, Annual Meeting, Providence, RI. October 2000.

Cortical color representations. Optical Society of America, Annual Meeting, Providence, RI. October 2000.

Developments in color appearance: physical, neural, computational, and perceptual. Keynote Lecture, Taipei Conference on Color Science, Taipei, Taiwan, June 2000.

Performance based color constancy. Department of Psychology, University of California at Santa Barbara, Santa Barbara, CA. June 2000.

Neural basis of shape from texture. Smith-Kettlewell Institute for Vision Science. San Francisco, CA. May 2000.

Neural basis of shape from texture. University of California at Berkeley, Berkeley, CA. May 2000.

Neural basis of shape from texture. The Rutgers University Series on Human and Computer Vision, New Brunswick, NJ. March 2000.

How to do perception with neurons. Department of Psychology, Bucknell University, PA. March 2000.

Junctions versus Gestalts. Optical Society of America, Annual Meeting, Santa Clara, CA. October 1999.

Measurements of object and illuminant identification. European Conference on Visual Perception, Trieste, Italy. August 1999.

Rethinking the perception of three-dimensional shape from texture cues. Max Planck Institute for Biological Cybernetics, Tübingen, Germany. August 1999.

Performance based color constancy. International Color Vision Society, XVth Symposium, Göttingen, Germany. July 1999.

Color representation by cortical neurons. Department of Neurology, Cornell Medical School, New York, NY. July 1999.

Rethinking the perception of three-dimensional shape from texture cues. Proteins to People: The First SUNY Vision Symposium, New York, NY. March 1999.

Perception without homunculi. NEC Institute, Princeton, NJ. January 1999.

A fresh look at color constancy: heuristics based algorithms. Optical Society of America, Annual Meeting, Baltimore MD. October 1998.

Is there a perceptual color space? Inter-Society Color Council/Optical Society of America Joint Symposium, Baltimore MD. October 1998.

Color and brightness induction: From Mach bands to 3-D configurations. Department of Psychology, North Dakota State University, Fargo, ND. September 1998.

Color constancy in a rough world. Kenneth Craik Seminar, Department of Physiology, Cambridge University, Cambridge, UK. July 1998.

Shape inconstancy in perspective. Institute of Ophthalmology, University of London, London, UK. July 1998.

Color and brightness induction: From Mach bands to 3-D configurations. Joint Aston University and Keele University Seminar, Keele, UK. July 1998.

A different look at color constancy: heuristics based algorithms. Computational Neurobiology Seminar, University of Chicago, Chicago, IL. May 1998.

Perceptual assumptions and projective distortions in a three-dimensional shape illusion. Department of Psychology, Harvard University, Cambridge, MA. February 1998.

A fresh look at color constancy. Brain and Behavioral Sciences, Massachusetts Institute of Technology, Cambridge, MA. February 1998.

Heuristics and priors in color and shape identification. Department of Computer Science, Columbia University, New York, NY. November 1997.

Color constancy in variegated scenes. Optical Society of America, Annual Meeting, Rochester, NY. October 1996.

Color constancy in variegated scenes. Wilmer Institute Vision Research Seminar, Johns Hopkins University School of Medicine, Baltimore, MD. October 1996.

Color perception in complex scenes: induction, adaptation and constancy. Workshop on Color Vision, Max Planck Institute for Biological Cybernetics, Tuebingen, Germany. September 1996.

Affine, vector, metric and functional color spaces. Optical Society of America, Annual Meeting, Portland, OR. September 1995.

Visual processing of chromatic and luminance transients. Optical Society of America, Annual Meeting, Portland, OR. September 1995.

Fundamental issues in motion perception. The Rutgers University Series on Human and Computer Vision, New Brunswick, NJ. February 1995.

Fundamental issues in motion perception. Department of Psychology, Hunter College, New York, NY. February 1995.

Fundamental issues in motion perception. Visual Sciences Center, University of Chicago, Chicago, IL. February 1995.

Feature-tracking, motion-energy, motion-boundaries. Sensation and Perception Seminar, New York University, NY. November 1994.

Steps towards understanding and overcoming impairments of color and motion perception. The Lighthouse Inc., New York, NY. October 1994.

Visual processing of motion boundaries. Department of Psychology, Rutgers University, Newark, NJ. April 1994.

Central adaptive mechanisms of human color vision. R. S. Dow Neurological Institute, Good Samaritan Hospital, Portland, OR. July 1993.

Central adaptive mechanisms of human color vision. Biopsychology Colloquium, University of Michigan, Ann Arbor, MI. June 1993.

Adaptation processes governed by the correlation and distribution of inputs. Schurmacher Institute of Vision Research, SUNY College of Optometry, New York, NY. April 1993.

Measurement of higher-level color processes using video displays. National Research Council, Institute for National Measurement Standards, Ottawa, Canada. November 1992.

Spatial and chromatic interactions in color appearance. Eastman Kodak Company Research Laboratories, Rochester, NY. October 1992.

Associative processes in visual perception. Department of Psychology, University of Washington, Seattle, WA. July 1992.

The S-cone color system in normals and diabetics. R. S. Dow Neurological Institute, Good Samaritan Hospital, Portland, OR. July 1992.

Analysis of chromatic and luminance motion by neurons in Macaque MT cortex. Department of Neurobiology, Columbia University, New York, NY. March 1992.

The S-cone color system in normals and diabetics. Eye Research Institute, Boston, MA. February 1992.

Spatial properties of higher-level color processes. Department of Optical Engineering, University of Texas at Dallas, Dallas, TX. September 1991.

The organization of lateral interactions within color mechanisms. Third International Brain Research Organization, World Congress of Neuroscience, Montreal, Canada. August 1991.

Simultaneous color induction. Department of Ophthalmology, McGill University, Montreal, Canada. August 1991.

Chromatic mechanisms beyond linear opponency. NATO Advanced Research Workshop, Roros, Norway. August 1990.

Human color adaptation. Department of Neurobiology, State University of New York, Stony Brook, NY. April 1990.

Adaptation in the S-cone color system. Rank Prize Funds Conference, Gloucestershire, UK. December 1989.

Color induction with complex stimuli. Center for Neural Sciences, New York University, New York, NY. April 1988.

Color and spatial factors in visual induction. Department of Psychology, Rutgers University, New Brunswick, NJ. February 1988.

Individual differences in color perception. Optical Society of America, Annual Meeting, Seattle, WA. October 1986.

Color contrast and color constancy. IBM Watson Research Center, Yorktown Heights, NY. December 1985.

Induced desensitization. RCA Research Laboratories, Princeton, NJ. April 1985.

Spatial factors in chromatic habituation. Wilmer Institute Vision Research Seminar, Johns Hopkins University School of Medicine, Baltimore, MD. February 1985.

Failure of additivity in color matches. Center for Visual Science, University of Rochester, Rochester, NY. June 1983.

Useful facts about color vision. United States Institute for Theatre Technology, Annual Meeting, Corpus Christi, TX. March 1983.

## **POST-DOCTORAL FELLOWS**

- 1994-96 B. Spehar, "Brightness perception in complex displays" (NIH).  
1996-99 A. Li, "Frequency modulation analysis of texture cues: brightness and" (NRSA).  
1998-99 K. Morikawa, "Psychophysical studies of Glaucoma" (CIBA Glaucoma Institute).  
1999-01 B. Khang, "Color constancy" (NIH).  
2000-02 S. Tsujimura, "Psychophysical studies of Glaucoma" (CIBA Glaucoma Institute).  
2000-01 A. F. Griffiths, "3-D visual illusions" (NIH).  
2001-03 H. Smithson, "Geometry of color perception" (NIH).

## **Ph.D. STUDENTS**

- A. G. Shapiro, "The effects of habituation on the response and interaction of color mechanisms", Columbia University, 1992.  
W. L. Sachtler, "Visual processing of complex motion", Columbia University, 1993.  
A. F. Griffiths, "Perceptual assumptions and perspective distortions in a three-dimensional shape illusion", Rutgers University, 1998.  
Robilotto, R, "Perception of achromatic reflectances and transparencies", SUNY Optometry, In progress.

## **UNDERGRADUATE RESEARCH STUDENTS**

- B. Yoshimi 1988-90.  
D. Halevy 1989-91.  
N. Zipser 1992-93.  
J. DeBonet 1993-95.

## **TEACHING EXPERIENCE**

- Computational Developments in Visual Perception (SUNY)  
Color Vision (SUNY)  
Computational Approaches to Human Vision (Columbia University)  
Physiological Psychology (Columbia University)  
Sensation and Perception (Columbia University)  
Mathematical Psychology (University of Chicago)  
Advanced Statistics (Roosevelt College)

## **GRANT REVIEW COMMITTEES**

- 1997-2001 National Institutes of Health, Visual Sciences B Study Section, Division of Research Grants (Permanent member).  
1996- Schnurmacher Institute for Vision Research, SUNY College of Optometry.

## **JOURNAL EDITORIAL BOARDS**

1992- COLOR Research and Application.

### **PROFESSIONAL SOCIETY APPOINTMENTS**

European Conference on Visual Perception 2001. Organizing Committee.

Optical Society of America, Tillyer Award Committee. (2001-2004).

Fellow of the Optical Society of America (2000).

CGIP 2000, First International Conference on Color in Graphics and Image Processing.  
International Program Committee.

Optical Society of America, Light and Color in the Open Air. Technical Program Committee (1996-97).

Optical Society of America, Color Technical Committee. Chair (1994-96); Vice-Chair (1993-94).

### **UNIVERSITY COMMITTEES**

“Spatial and Temporal Dimensions of Color Vision: The 2nd SUNY Vision Symposium”, Organizer (May 2002).

“Proteins to People: The 1st SUNY Vision Symposium”, Organizer (March 1999).

Committee on Research Planning, Chair, SUNY Optometry (1999- ).

Committee on Graduate Curriculum, Chair, SUNY Optometry (1998- ).

Retinal and CNS Clinical Research Group, Chair, SUNY Optometry (1998-99).

Institutional Review Board, SUNY Optometry (1996- ).

Colloquium and Visiting Scientist Committees, Chair, SUNY Optometry (1997- ).

Search Committee for Computer Systems Administrator, Chair, SUNY Optometry (1995-96).

Committee on Faculty Graduate Qualifications, SUNY Optometry (1997- ).

Comprehensive Examination Committee, SUNY Optometry (1996- ).

Library Committee, Columbia University (1987-94).

Committee on Scientific Equipment, Chair, Department of Psychology, Columbia University (1990-94).

Committee on Computers and Computer Networks, Department of Psychology, Columbia University (1985-91).

### **GRANT REVIEWS**

National Science Foundation.

Air Force Office of Science and Research.

Science and Engineering Research Council (U.K.).

Human Frontiers Science Program Organization.

Research Grants Council of Hong Kong.

### **JOURNAL REVIEWS**

Vision Research; Journal of the Optical Society of America, Perception, Spatial Vision, Visual Neuroscience; Perception and Psychophysics, Proceedings of the Royal Society: Biological Sciences, Applied Optics, Investigative Ophthalmology and Visual Science, Clinical Visual Science, Journal of Neuroscience, Journal of Neurophysiology; Optics Letters, Color Research and Application, Journal of Glaucoma, Neuron.