

## CURRICULUM VITAE

Sep 23, 2010

**PERSONAL INFORMATION:**

NAME: Saumil Surendra Patel  
PRESENT TITLE: Research Assistant Professor, Department of Neurobiology & Anatomy, University of Texas – Houston Medical School  
ADDRESS: 4818 E. Laureldale, Houston, TX-77041  
BIRTHDATE: Jan 10, 1963  
CITIZENSHIP: India  
WEB-SITE: [www.saumilresearch.org](http://www.saumilresearch.org)

**TRAINING:**

UNDERGRADUATE EDUCATION: 1984, B.E., Electronics Engineering, M. S. University, Baroda, Gujarat, India  
GRADUATE TRAINING: 1986, M.E., Electrical Engineering, University of Houston, Houston  
1995, Ph.D., Electrical and Computer Engineering, University of Houston, Houston  
POSTGRADUATE TRAINING: 1996 - 2001, Post-doctoral Research Fellow, College of Optometry, University of Houston, Houston

**ACADEMIC APPOINTMENTS:**

2001 - 2006 Research Assistant Professor, Department of Electrical and Computer Engineering, University of Houston, Houston  
2001 - 2006 Adjunct Faculty, College of Optometry, University of Houston, Houston

**PROFESSIONAL ORGANIZATIONS:**

Association for Research in Vision and Ophthalmology, Member  
Vision Sciences Society, Member  
Society for Neuroscience, Member

**HONORS AND AWARDS:**

G.E. peer recognition nominee, A major contribution to cost effectiveness and quality of performance, 1989.  
G.E. lightning award, Designing a Macintosh based real-time data acquisition interface for the life sciences project division, 1991.  
NASA public service group achievement award, Mac integrated real-time acquisition ground equipment (MIRAGE) development team, 1991.  
NASA nomination for invention of the year, Distributed digital to analog conversion system (DDACS), 1993.  
NASA certificate of recognition, Distributed digital to analog conversion system (DDACS), 1993.  
ISSO Aerospace post-doctoral fellowship, 1996.  
"Normalization of position and stereoscopic depth perception," funded by UHCO VRSG program. Co-I, 1999.  
Vision Research, Top Reviewer, 2006-2007  
NSF BCS 0924636 Co-PI, 2009-2011  
Johnson and Johnson, Co-I, 2009-2010

**EDITORIAL POSITIONS:**

Reviewer (Currently averaging 5-7 articles per year):

*IEEE Transactions on Biomedical Engineering*  
*Vision Research*  
*Perception*  
*Optometry and Vision Science*  
*Proceedings of the Royal Society B*  
*Journal of Experimental Psychology – General*  
*Psychonomic Bulletin & Review*  
*Investigative Ophthalmology and Vision Science*

**SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:**

Reviewer for University of Houston GEAR Grant, 2010  
 Reviewer for Medical Research Council, U.K., 2006

**SERVICE ON HOUSTON AREA COMMITTEES:**

Co-Chair of Vision Science Sessions at the Annual Meeting of Houston Society for Engineering in Medicine and Biology (2003, 2004).

**SERVICE ON GRADUATE COMMITTEES (University of Houston, 2001-06):**

Member of Thesis Committee, Deepika Sridhar, Ph.D., 2010, Vision Science  
 Member of Thesis Committee, Jin Qian, Ph.D., 2008, Vision Science.  
 Member of Thesis Committee, Srividhya Vilupuru, Ph.D., 2006, Vision Science.  
 Member of Thesis Committee, Avesh Raghunandan, Ph.D., 2006, Vision Science.  
 Member of Thesis Committee, Frank Visco, M.S., 2006, Vision Science.  
 Member of Thesis Committee, Alpay Koc, Ph.D., 2005, Electrical and Computer Engineering.  
 Member of Thesis Committee, Shobana Subramaniam, M.S., 2004, Vision Science.  
 Member of Thesis Committee, Mahalakshmi Ramamurthy, M.S., 2002, Vision Science.

**SERVICE TO THE COMMUNITY:**

Volunteer soccer coach at a school for autistic children (The Westview School), 2003-2004.  
 Volunteer IT administrator at The Branch School, 2007-present.

**PAST TEACHING RESPONSIBILITIES (University of Houston, 2001-2006):**

Lecturer, Introduction to Cognitive Science, Department of Philosophy  
 Topics: Turing machine and class projects on visual perception

Lecturer, Advanced Sensory Processes, College of Optometry  
 Topics: Digital image processing, models of eye movements and models of motion perception

Special Problems, College of Optometry  
 Topics: Binocular vision and perceptual learning.

**PAST GRANT SUPPORT:**

UHCO VRSG  
 Co-investigator 1999  
 Normalization of position and stereoscopic depth perception  
 \$3500

**CURRENT GRANT SUPPORT:**

NSF BCS  
 Co-PI 2009-2011  
 Neurophysiological Constraints and Model of Reflexive Spatial Attention  
 \$257000

JOHNSON AND JOHNSON

Co-I 2009-2010

Predicting the success of simultaneous-vision contact lens wear from simulated blur perception  
\$78700

#### **PENDING GRANT SUPPORT:**

NIH R01 (P.I.: Anne Sereno)

Co-P.I. (100%) 2011 - 2016

Social orienting in autism

NIH R01

P.I. (100%) 2011 - 2015

Disparity synthesis in stereoscopic depth perception

#### **PUBLICATIONS:**

##### **A. Abstracts:**

1. Chung, S.T.L., **Patel, S.S.** and Bedell H.E. Lower dimensional neural representation of pattern information in peripheral compared to foveal vision *Society for Neuroscience Abstracts*, 2010.
2. **Patel, S.S.** and Sereno A.B. Modeling maintained activity in dorsal and ventral stream neurons using just bottom-up processes. *Society for Neuroscience Abstracts*, 2010.
3. Red, S.D., **Patel, S.S.** and Sereno A.B. Role of shape selectivity in spatial attention. *Society for Neuroscience Abstracts*, 2010.
4. Chung, S. T. L. and **Patel, S. S.** Spatial and Temporal Proximity of Objects for Maximal Crowding. *Annual Meeting of Vision Sciences Society*, 2010.
5. Concepcion, F.A., **Patel, S.S.**, Agosto, M.A., Wilson, J.H., Wensel, T.G. and Mojumder, D.K. Development and Testing of a Low-Cost PC Controlled *in vivo* Electroporator. *ARVO Abstract*, 2010.
6. Jeter C.B. Hood A.J., Palao A., **Patel S.S.**, Jankovic J., and Sereno A.B. Clinical correlates of eye movements in Huntington disease. *American Academy of Neurology Abstracts*, 62, 2010.
7. Red, S.D., **Patel, S.S.**, and Sereno, A.B. Shape effects on reflexive spatial selective attention. *National Student Research Forum Abstracts*, 51, 2010.
8. Jeter, C. B., **Patel, S. S.**, Butler, I. J. and Sereno, A. B. Saccadic measures of inhibitory control and working memory in Tourette syndrome subtypes. *Annual Meeting of the Society for Neuroscience*, 2009.
9. Jeter, C.B., **Patel, S.S.** Butler, I. and Sereno, A.B. Inhibition and working memory in Tourette Syndrome subtypes, Tourette Syndrome Association Scientific Symposium, 2009.
10. **Patel, S.S.**, Peng, X. and Sereno, A. B. Shape effects on reflexive spatial selective attention and inhibition of return. *Annual Meeting of the Society for Neuroscience*, 2007.
11. **Patel, S.S.**, Bedell, H.E. and Sampat, P. Mechanisms of stereoscopic depth perception. *Annual Meeting of Houston Society for Engineering in Medicine and Biology*, 2006.
12. Yilmaz, O., Tripathy, S., Ogmen, H and **Patel, S.S.** Attraction of flashes to moving dots. *Annual Meeting of Houston Society for Engineering in Medicine and Biology*, 2006.
13. **Patel, S.S.** and Bedell, H.E. Disparities in non-vertical spatial frequency components extend the range of accurate depth perception in humans. *Annual Meeting of Vision Sciences Society*, 2006.
14. Yilmaz, O., Tripathy, S., Ogmen, H and **Patel, S.S.** Attraction of flashes to moving dots. *Annual Meeting of Vision Sciences Society*, 2006.
15. Bedell, H. E., Lien, T. C., Tong, J., Cisarik, P. M. and **Patel, S. S.**, Motion sensitivity and fixation variability along individual meridians, *Annual Meeting of Vision Sciences Society*, 2006.
16. Qian, J., **Patel, S.S.** and Bedell, H.E. Effects of spatial frequency, contrast, and stimulus size on the magnitude of perceived depth and speed. *Annual Meeting of Vision Sciences Society*, 2006.
17. Lien, T.C., Tong, J., Bedell, H.E., Cisarik, P.M. and **Patel, S.S.** The relationship between motion sensitivity and fixation variability in eccentric gaze. *Annual Meeting of Vision Sciences Society*, 2006.

18. Kafalıgönül, H., Ögmen, H., **Patel, S.S.**, Bedell, H. E. and Purushothaman, G. Simultaneous flash-lag effects in two directions reveal a slow stage of multi-directional motion integration. *Annual Meeting of Vision Sciences Society*, 2006.
19. Tong, J, **Patel, S.S.** and Bedell, H.E. Asymmetrical modulation of the temporal impulse response during smooth pursuit. *Annual Meeting of Vision Sciences Society*, 2006.
20. **Patel, S. S.** and Bedell, H. E. Non-horizontal disparities enhance sensitivity of the human stereovision system. *Annual Meeting of Vision Sciences Society*, 2005.
21. **Patel, S. S.** and Bedell, H. E., Role of non-vertical disparities in the perception of stereoscopic depth. *Annual Meeting of Houston Society for Engineering in Medicine and Biology*, 2005.
22. Sampat, P., **Patel, S. S.** and Bedell, H. E. The effect of simulated spherical and astigmatic blur on stereothresholds, *Annual Meeting of American Academy of Optometry*, Tampa, FL., 2004.
23. Poonja, S. G., **Patel, S. S.** and Roorda, A. J. Dynamic visual stimulus presentation in an adaptive optics scanning laser ophthalmoscope. *Annual meeting of OSA*, 2004
24. Aydin, M., Subramaniam S., **Patel, S. S.**, Ögmen, H. and Bedell, H. E. The effect of nearby targets and eye movements on perceived motion smear. *Annual Houston Conference on Biomedical Engineering Research*, Houston, TX., 2004
25. **Patel, S. S.**, Chung, S. T. C. and Bedell, H. E. Motion-Induced Position Shifts are Limited by Conflicting Relative Position Information. *VSS Abstract*, 2004.
26. Bedell H. E., Nguyen K. and **Patel, S. S.** The relationship between visual frame-of-reference effects for perceived size and speed. *VSS Abstract*, 2004.
27. Sampat, P., **Patel, S. S.** and Bedell, H. E. "The effect of simulated spherical and astigmatic blur on stereothresholds", *Annual Meeting of American Academy of Optometry*, Tampa, FL., 2004
28. **Patel, S. S.** and Bedell, H. E. "Threshold and suprathreshold perception of motion during voluntary oscillatory head movements," *Annual Houston Conference on Biomedical Engineering Research*, Houston, TX., 2003
29. **Patel, S. S.** and Bedell, H. E.. Perceived depth from veridical and aliased binocular phase disparities in a random-dot (RD) stimulus. *VSS Abstract*, 2003.
30. **Patel, S. S.** and Bedell, H. E.. Stereothresholds for random-dot targets with orientationally matched and unmatched blur in the two eyes. *ARVO Abstract*, 2003.
31. Ogmen, H., Camuz, K., **Patel, S. S.** and Bedell, H. E.. Transient and steady-state phases of position computation for a moving target. *VSS Abstract*, 2003.
32. Bedell, H. E., Ramamurthy, M. and **Patel, S. S.**. The temporal impulse response function in infantile nystagmus. *ARVO Abstract*, 2003.
33. Bedell, H. E., Ramamurthy, M., **Patel, S. S.** and Vu-Yu, L.. The temporal impulse response function during smooth pursuit. *VSS Abstract*, 2003.
34. **Patel, S. S.**, Chung, S. T. L., Bedell, H. E., and Ogmen, H.. Color and motion: which is the tortoise and which is the hare? *VSS Abstract*, 2002.
35. **Patel, S. S.** and Bedell, H. E. "Normalization" of suprathreshold motion perception. *ARVO Abstract*, 2002.
36. Bedell, H. E. and **Patel, S. S.**. Attenuation of perceived motion smear during the vestibulo-ocular reflex. *ARVO Abstract*, 2002.
37. Ramamurthy, M., Bedell, H. E. and **Patel, S. S.**. Stereothresholds for moving targets separated by vertical and horizontal gaps. *ARVO Abstract*, 2002.
38. Bedell, H. E., **Patel, S. S.** and Chung, S. T. L.. Attenuation of perceived motion smear during vergence tracking. *ARVO Abstract*, 2001.

39. **Patel, S. S.**, Ukwade, M., Stevenson, S. B., Bedell, H. E., Sampath, V. and Ogmen, H. Role of oblique phase disparities in stereoscopic depth perception. *ARVO Abstract*, 2001.
40. **Patel, S. S.**, Ukwade, M., Stevenson, S. B., Bedell, H. E., Sampath, V. and Ogmen, H.. Stereoscopic depth perceived from differences in the Fourier phase spectra of images in the two eyes. *Annual Houston Conference on Biomedical Engineering Research*, 2001.
41. Ramamurthy, M., Bedell, H. E. and **Patel, S. S.** Stereoacuity and Vernier acuity for moving targets for a range of target velocities. *American Academy of Optometry Abstract*, 2001.
42. **Patel, S. S.**, Ukwade, M., Bedell, H. E. and Sampath, V. Near stereothresholds measured with sub-pixel resolution using random-dot stimuli. *American Academy of Optometry Abstract*, 2000.
43. **Patel, S. S.**, Bedell, H. E., Tsang, D. and Ukwade, M. "Normalization" of suprathreshold perception of position and stereoscopic depth. *ARVO Abstract*, 2000.
44. Ukwade, M., Bedell, H. E. and **Patel, S. S.** Stereothresholds with disparity noise at different temporal frequencies. *ARVO Abstract*, 2000.
45. Bedell, H. E., Founkner-Fracht, E. and **Patel, S. S.**, Independence of horizontal and vertical eye movements during horizontal pursuit. *ARVO Abstract*, 2000.
46. Jiang, B., Queener, H. and **Patel, S. S.** Parameters of accommodation and vergence systems determined by a random search optimization method. *ARVO Abstract*, 2000.
47. **Patel, S. S.**, Ukwade, M., Stevenson, S. B., Bedell, H. E., Sampath, V. and Ogmen, H. Stereopsis from inter-ocular phase disparity. *ARVO Abstract*, 1999.
48. **Patel, S. S.**, Bedell, H. E., Reschke, M., Harm, D., Courtney, C., Jackson, C., Wood, S., Cerisano, J. and Gasaway, D. Vernier and stereo thresholds during large voluntary gaze shifts. *Society for Neuroscience Abstract*, 1998.
49. **Patel, S. S.** and Bedell, H. E. Motion thresholds within a tracked target are elevated during smooth pursuit and vergence tracking. *ARVO Abstract*, 1998.
50. Purushothaman, G., **Patel, S. S.**, Bedell, H. E. and Ogmen, H. Perceived spatial lag of flashed vs. moving lines varies with relative luminance and timing. *ARVO Abstract*, 1998.
51. **Patel, S. S.**, Bedell, H. E., Reschke, M., Harm, D., Gasaway, D. and Cerisano, J. Vernier and stereo thresholds during large voluntary gaze shifts. *Annual Houston Conference on Biomedical Engineering Research*, 1998.
52. **Patel, S. S.**, Jiang, B. and Ogmen, H. On the neural origin of binocular fixation disparity. *Society for Neuroscience Abstract*, 1997.
53. **Patel, S. S.**, Ogmen, H., White, J. and Jiang, B. Vernier judgments for targets of arbitrary shape. *ARVO Abstract*, 1997.
54. **Patel, S. S.**, Bedell, H. E., Reschke, M., Harm, D., Gasaway, D. and Cerisano, J. Vernier threshold as a potential indicator of post-space flight gaze instability. *Annual Houston Conference on Biomedical Engineering Research*, 1997.
55. **Patel, S. S.**, Ogmen, H. and Jiang, B. Steady-state vergence errors modeled by asymmetry in convergence and divergence sub-systems. *ARVO abstract*, 1996.
56. Jiang, B., **Patel, S. S.**, Ogmen, H. and White, J., Horizontal disparity vergence system exhibits motor non-linearity. *ARVO abstract*, 1995.
57. **Patel, S. S.**, Bullen, A. and Saggau, P. Simultaneous multi-site recording with two fluorescent probes using high-speed laser random-scanning microscopy. *Society for Neuroscience abstract*, 1995.
58. **Patel, S. S.**, Ogmen, H., White, J. and Jiang, B. Neural network model of short-term disparity vergence dynamics. *ARVO abstract*, 1995.
59. Jiang, B., **Patel, S. S.**, White, J. and Ogmen, H. Effects of prolonged convergence on dark and disparity vergence dynamics *ARVO abstract*, 1995.

60. **Patel, S. S.**, Ogmen, H., White, J. and Jiang, B. A neural network model of short term disparity vergence dynamics. *Annual Houston Conference on Biomedical Engineering Research*, 1994.
61. **Patel, S. S.**, Colom, L. and Saggau, P. Optical imaging of carbachol-induced spontaneous epileptiform oscillations in Guinea pig hippocampal brain slices. *Society for Neuroscience*, Abstract, 1993.
62. Igarashi, M., Himi, T., Ishii, M. and **Patel, S.S.**, Studies on R-R intervals and salivation in vestibular-visual conflict sickness. *Proceedings of the Symposium on Vestibular Organs and Altered Force Environment*, October 1987.

#### B. Refereed Original Articles in Journals:

1. Hood A.J., Jeter C.B., Palao A., **Patel S.S.**, Jankovic J. and Sereno, A.B. (in preparation). Clinical and genetic correlates of eye movements in Huntington disease.
2. Babin, S.L., Hood, A.J., Wassef A.A., **Patel, S.S.**, and Sereno, A.B. (in preparation). Olanzapine benefits both impaired and nonimpaired schizophrenics: A saccadic eye movement study.
3. Babin, S.L., Hood, A.J., Wassef A.A., **Patel, S.S.**, and Sereno, A.B. (in preparation). The effect of aripiprazole on reflexive and voluntary saccadic eye movements in impaired and nonimpaired schizophrenics.
4. Hood A.J., Babin S.L., Xing Y., **Patel S.S.**, Wassef A.A., Sereno A.B. (in preparation). Differential effects of valproic acid in schizophrenia.
5. Jeter, C. B., **Patel, S. S.** and Sereno, A. B. Robust spatial working memory task using saccades. *Behavior Research Methods*, submitted.
6. Losavio, B. E., Iyer, V., **Patel, S. S.** and Saggau, P. Acousto-optic laser scanning for multi-site photo-stimulation of single neurons *in vitro*. *Journal of Neural Engineering*, 7, 045002, 2010.
7. Hill, J., **Patel, S. S.**, Gu, X., Seyedali, N., Bachevalier, J., Sereno, A. B. Social orienting: reflexive versus voluntary control, *Vision Res.*, 50, 2080-2092, 2010.
8. **Patel, S. S.**, Peng, X. and Sereno, A. B. Shape effects on reflexive spatial selective attention and a plausible neurophysiological model, *Vision Res.*, 50, 1235-1248, 2010.
9. Tong, J., Ramamurthy, M., **Patel, S. S.**, Vu-Yu, L. P. and Bedell, H. E. The temporal impulse response function during smooth pursuit, *Vision Res.*, 49, 2835-2842, 2009.
10. **Patel, S. S.**, Bedell, H. E., Tsang, D., K. and Ukwade, M. T. Relationship between threshold and suprathreshold perception of position and stereoscopic depth, in *J. Opt. Soc. Am. A.* 26, 847-61, 2009.
11. Bedell, H.E., Ramamurthy, M., **Patel, S. S.**, Subramaniam, S., Vu-Yu, L. P. and Tong, J. The temporal impulse response function in infantile nystagmus, *Vision Res.*, 48, 1575-83, 2008.
12. Purushothaman, G., Bedell, H.E., Ogmen, H. and **Patel, S. S.** Neurophysiology of compensation for time delays: visual prediction is off track. *Behavioral and Brain Sciences*, 31, 214, 2008.
13. Ogmen, H., **Patel, S. S.**, Purushothaman, G. and Bedell, H.E., Moving backward through perceptual compensation. *Behavioral and Brain Sciences*, 31, 212-213, 2008.
14. Yilmaz, O., Tripathy, S., **Patel, S. S.** and Ogmen, H. Attraction of flashes to moving dots. *Vision Res.*, 47, 2603-15, 2007.
15. Gantz, L., **Patel, S. S.**, Chung, S. T. L. and Harwerth, R. S. Mechanisms of perceptual learning of depth discrimination in random-dot stereograms. *Vision Res.*, 47, 2170-8, 2007.
16. Chung, S.T.L., **Patel, S.S.**, Bedell, H.E. and Yilmaz, O. Spatial and temporal properties of the illusory motion-induced position shift for drifting stimuli. *Vision Res.*, 47, 231-243, 2007.
17. Tong, J., **Patel, S.S.** and Bedell, H. E. The attenuation of perceived motion smear during combined eye and head movements. *Vision Res.*, 46, 4387-4397, 2006.
18. Bansal, V, **Patel, S.S.** and Saggau, P. High-speed addressable confocal microscopy for functional imaging of cellular activity. *J. Biomed Opt.*, 11, 34003, 1-9, 2006.

19. **Patel, S.S.**, Bedell, H.E. and Sampat P., Pooling signals from vertically and non-vertically tuned disparity mechanisms in human stereopsis, Vision Res., 46, 1-13, 2006.
20. Poonja, S., **Patel, S.S.**, Henry, L. and Roorda, A., Dynamic visual stimulus presentation in an adaptive optics scanning laser ophthalmoscope. Journal of Refractive Surgery, 21, S575-80, 2005.
21. Bedell, H.E. and **Patel, S.S.**, Attenuation of perceived motion smear during the vestibulo-ocular reflex, Vision Res., 45, 2191-2200, 2005.
22. Tong, J., **Patel, S.S.** and Bedell, H.E., Asymmetry of perceived motion smear during head and eye movements: evidence for a dichotomous neural categorization of retinal image motion, Vision Res., 45, 1519-1524, 2005.
23. Ramamurthy, M., Bedell, H.E. and **Patel, S.S.**, Stereothresholds for moving line stimuli for a range of velocities, Vision Res., 45, 789-799, 2005
24. Ögmen, H., **Patel, S.S.**, Bedell, H.E. and Camuz, K., Differential latencies and the dynamics of the position-computation process for moving targets, assessed with the flash-lag phenomenon. Vision Res. Vol 44, pp. 2109-2128, 2004.
25. Bedell, H. E., Chung, S. T. C. and **Patel, S. S.**, Attenuation of perceived motion smear during vergence and pursuit tracking, Vision Res., Vol 44, pp. 895-902, 2004.
26. **Patel, S.S.**, Ukwade, M.T, Stevenson, S.B., Bedell, H.E., Sampath, V., and Ögmen, H., Stereoscopic depth perception from oblique phase disparities, Vision Res., Vol. 43, pp. 2479-2492, 2003.
27. Bedell, H. E., Chung, S. T. L., Ögmen, H. and **Patel, S. S.**, Color and motion: Which is the tortoise and which is the hare ?, Vision Res., Vol. 43, pp. 2403-2412, 2003.
28. **Patel, S.S.**, Ukwade, M.T., Bedell, H.E., and Sampath, V., Near stereothresholds measured with random-dot stereograms using phase disparities, Optometry, Vol. 74, pp. 453-461, 2003.
29. **Patel, S.S.**, Jiang, B.C. and Ögmen, H., Vergence dynamics predict fixation disparity, Neural Computation, 13, 1495-1525, 2001.
30. **Patel, S.S.**, Ögmen, H., Bedell, H.E., Sampath, V., Flash-lag effect: Differential latency, not postdiction, Science, 290, 1051a., 2000.
31. Akutsu, H., Bedell, H.E., **Patel, S.S.**, Recognition thresholds for letter with simulated dioptric blur, Optom. and Vision Sci., 77, 524-530, 2000.
32. Bedell, H.E., Chung, S.T.L. and **Patel, S.S.**, Elevation of Vernier thresholds during image motion depends on target configuration. J. Opt. Soc. Am. A., 17, 947-954, 2000.
33. **Patel, S.S.**, Jiang, B.C., White, J.M. and Ögmen, H. Non-linear alteration of transient vergence dynamics after sustained convergence. Optom. and Vision Sci., 76, 656-663, 1999.
34. **Patel, S.S.**, Bedell, H.E. and Ukwade, M.T., Vernier judgments in the absence of regular shape information. Vision Res. 39: 2349-2360, 1999.
35. Bedell, H.E., **Patel, S.S.** and Chung, S.T.L., Comparison of letter and Vernier acuities with dioptric and diffusive blur, Optom. and Vision Sci. 76: 115-120, 1999.
36. Purushothaman, G., **Patel, S.S.**, Bedell, H.E. and Ögmen, H., Moving ahead through differential visual latency. Nature, 396: 424, 1998.
37. **Patel, S.S.**, Ögmen, H., White, J.M. and Jiang, B.C., Neural network model of short-term horizontal disparity vergence dynamics. Vision Res., 37, 1383-1399, 1997.
38. Bullen, A., **Patel, S.S.** and Saggau, P., High speed random-access fluorescence microscopy: I. High resolution optical recording with voltage-sensitive dyes and ion indicators. Biophysical Journal, 73, 1, 1997. [7]
39. Sinha, S., **Patel, S.S.** and Saggau, P., Simultaneous optical recording of evoked and spontaneous transients of membrane potential and intracellular calcium concentration with high spatio-temporal resolution. Journal of Neuroscience Methods, 60, 1995.

40. Mukai, C., Lathers, C., Charles, J., Bennett, B., Igarashi, M. and **Patel, S.S.**, Acute hemodynamic responses to weightlessness during parabolic flight. J. Clin. Pharmacol., 31, 993-1000, 1991.
41. Ishii, M., Igarashi, M., **Patel, S.S.**, Himi, T. and Kulecz, W., Autonomic effects on R-R variations of the heart rate in the squirrel monkey: An indicator of autonomic imbalance in conflict sickness. American Journal of Otolaryngology, May 1987.
42. Igarashi, M., Himi, T., Kulecz, W., and **Patel S.S.**, The role of saccular afferents in vertical optokinetic nystagmus in primates. A study in relation to optokinetic nystagmus in microgravity. Arch Otorhinolaryngol. 1987.

### C. Invited Articles in Journals:

1. Purushothaman, G., Bedell, H.E., Ogmen, H. and **Patel, S. S.** Neurophysiology of compensation for time delays: visual prediction is off track. Behavioral and Brain Sciences, 31, 214, 2008.
2. Ogmen, H., **Patel, S. S.**, Purushothaman, G. and Bedell, H.E., Moving backward through perceptual compensation. Behavioral and Brain Sciences, 31, 212-213, 2008.

### D. Chapters:

1. Sereno, A.B., Lehky, S.R., **Patel, S. S.**, and Peng, X. A neurophysiological correlate and model of reflexive spatial attention. In N. Srinivasan, Bhoomika R. Kar, and J. Pandey (eds.), Advances in Cognitive Science: Volume 2, 2010.
2. Kafaligonul, H., **Patel, S. S.**, Ogmen, H., Bedell, H. E. and Purushothaman, G. Perceptual asynchronies and the dual-channel differential latency hypothesis. In Nijhawan, R., (ed), Space and Time in Perception and Action, London, Cambridge Press, 379-395.
3. Bedell, H.E., Tong, J., **Patel, S. S.** and White, J.M., Perceptual influences of extra-retinal signals for normal eye movements and infantile nystagmus. In Leigh, R.J. and Devereaux, M.W. (eds.) Understanding the Mechanism and Treatment of Infantile Forms of Nystagmus and Strabismus, London, Oxford University Press, 11-22.
4. Bedell, H.E., **Patel, S.S.**, Chung, S.T.L. and Ögmen, H., Perceptual consequences of timing differences within parallel feature-processing systems in human vision. In Ögmen, H. and Breitmeyer, B.G. (eds.), The First Half Second: The Microgenesis and Temporal Dynamics of Unconscious and Conscious Visual Processes. Boston, MIT Press, 245-258.
5. Saggau, P., Bullen, A. and **Patel, S.S.**, Acousto-optic random-access laser scanning microscopy: Fundamentals and applications to optical recording of neuronal activity. Cellular and Molecular Biology, 44, 827-846, 1998.