# Fall Vision Meeting, 2006

### in cooperation with the Optical Society of America

October 6-8, 2006

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## Fall Vision Meeting (FVM) Abstracts were published in the Journal of Vision

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Fall Vision Meeting, 2006: Abstracts

The Fall Vision Meeting Meeting was held October 6-8, 2006, in Rochester, New York in cooperation with the Optical Society of America. The following are the abstracts of that meeting. ARVO holds the copyright to Journal of Vision, Vol. 6, No. 13, but not to the individual abstracts in that issue. ARVO has published these abstracts as a service to the vision science community.

#### Neural Coding in the Retina

1	Demb	Cellular mechanisms for visual adaptation		
2	Simoncelli, Pillow, Shlens, Paninski, & Chichilnisky	Toward characterizion of the complete visual signal in a patch of retina		
3	Nirenberg	Ruling out and ruling in neural codes		
4	Masland	The number of visual channels in mammalian retinas		
Contributed Talk Session: Color				
5	Stockman & Smithson	Transient tritanopia of a second kind redux: Delayed loss of S-cone sensitivity after long-wavelength field onset is consistent with the sluggish generation of an active photoproduct within the L- and M-cones		
6	Cao, Zele, Smith, & Pokorny	S-cone discrimination with spatial and temporal chromatic contrast		
7	Gabree & Eskew	Pedestal masking of S-cone increments and decrements: Less contrast gain control in the S-OFF pathways		
8	Richters & Eskew	Mechanisms underlying long-term chromatic adaptation		
9	Verma & Pianta	Contribution of human cone photoreceptors to the photopic 30-Hz flicker electroretinogram		
10 Wade & McKee		Chromatic independence of surround suppression mechanisms is		

evidence for an early cortical site of contrast normalization

#### Multi-sensory Processing and Cross-modal Plasticity

11 Ptito	Cross-modal plasticity: Lessons from the visual system
12 Amedi, Camprodon, Merabet, Meijer, & Pascual-Leone	Towards closing the gap between visual neuroprostheses and sighted restoration: Insights from studying vision, cross-modal plasticity and sensory substitution
13 Pouget	Neural basis of Bayes-optimal multisensory integration: Theory and experiments
14 Romanski	Integration of auditory and visual communication information in the primate prefrontal cortex
Color Naming and Cone Mechanisms	
15 Hardin	Color categories: Nature and nurture
16 Hofer	The contributions of cones to color vision
17 Wuerger	The cone inputs to colour appearance mechanisms
18 Kuehni	What the World Color Survey tells about hue based color categories
Contributed Talk Session: Vision	
19 Wolfing Morgan, Gray, Dubra, Wolfe, Gee, Merigan, Sheehy, Masella, & Williams	High-resolution autofluorescence imaging of individual retinal pigment epithelial cells in vivo
20 Li & Roorda	Analysis of cone packing arrangement in adaptive optics images
21 Norcia, Pettet, Vildavski, Wade, & Appelbaum	Regions of human visual cortex sensitive to small vernier offsets as determined by EEG source-imaging
22 Shapiro & Smith	Are simultaneous contrast phenomena really illusions? Or does the visual system represent only the relevant spatial frequencies?
23 McKeefry & Burton	Speed selectivity in visual short term memory for motion
24 Herbert, Pelz, Calderwood, Cook, Curtis, DeAngelis, & Garrison	Searching for symmetry: Eye movements during a difficult symmetry detection task
Cortical and Sub-cortical Circuitry	
25 Carandini, Frazor, & Benucci	Standing waves and traveling waves in visual cortex
26 Usrey	Dynamic properties of thalamic neurons for vision
27 Ferster	How threshold shapes cortical selectivity
28 Sherman	The role of thalamus in cortical function: Not just a simple relay
Vision and Reading	
29 Seidenberg	Visual and phonological processing deficits in dyslexia: Evidence and possible linkage
30 Talcott	Sensory processing skills and deficits as potential indicators of reading disability
31 Dougherty	The development of visual pathways for reading
32 Borsting	The role of the eye care professional in helping individuals with reading problems
Evolution of Opsins and Color Vision	
33 Yokoyama	General evolution of the opsins in vertebrates
34 Hunt	Molecular evolution of colour vision in primates
35 Neitz & Neitz	Evolution of opsins and inter-individual variability in humans
36 Osorio	Ecology of primate color vision

#### Retinal Structure & Function Revealed with High-Resolution Imaging

37 Choi, Zawadzki, & Werner	High-resolution imaging of retinal disease and their retinal function
38 Imanishi	Noninvasive two-photon imaging reveals retinyl ester storage structures in the eye
39 Stevenson	Eye movement recording and retinal image stabilization with high magnification retinal imaging
40 Bizheva, Pflug, Hermann, Povazay, Sattmann, Qiu, Anger, Reitsamer, Popov, Taylor, Unterhuber, Ahnelt, & Drexler	Depth-resolved optical probing of retinal physiology with functional ultrahigh resolution optical coherence tomography
Poster Abstracts	
41 Anderson, DeAngelis, & Movshon	Highly redundant population coding explains the representation of spatial frequency information in primary visual cortex
42 Appelbaum, Vildavski, Pettet, Wade, & Norcia	Dynamics of scene segmentation: The role of boundary information
43 Cao, Merwine, & Grzywacz	Weakness of surround inhibition with natural-image stimulation
44 Coletta & Frericks	Visual acuity at low luminance in myopia
45 Geer & Schmidt	Initial visibility of a translating target is modulated by inter-frame contour separation
46 Green & Schmidt	Independent modulation of illusory line motion by onset and offset transients
47 Griffin	Basic colour foci and landmarks of the body colour solid
48 Ferri & Guirao	Effect of optical noise on retinal image and stochastic resonance
49 Guirao & Ferri	Information theory measures for estimating retinal image quality
50 Henning & Wichmann	Some observations on the pedestal effect or dipper function
51 Howland, Mihashi, & Sharma	Compensation of monochromatic aberrations in older human eyes
52 Hunter, Campbell, & Kisilak	Behaviour of image quality metrics in the presence of defocus and aberrations
53 Jokela-Määttä, Vartio, Paulin, & Donner	Individual variation in rod absorbance spectra correlated with opsin gene polymorphism in sand goby (Pomatoschistus minutus)
54 Kawamorita & Uozato	Changes of natural pupil size and ocular wavefront aberrations under the binocular and the monocular conditions
55 Li, Kolakowski, & Pelz	Using structured lighting to enhance video-based eye tracking systems
56 Mancuso, Barbur, Neitz, Rodriguez- Carmona, & Neitz	Feasibility of producing sufficient L/M opponency to support red green colour vision by coexpressing an L pigment transgene in a subset of M cone photoreceptors of protanopes
57 Mihashi , Kobayashi, Nakazawa, Yamaguchi, Hirohara, & Otaki	Refraction measurements with an open-view binocular Shack-Hartmann wavefront sensor
58 Olzak, Wagge, & Thomas	Signal detection rating models underlying the uncertainty paradigm
59 Pallett & MacLeod	Inefficient discrimination of natural stimuli: Faces
60 Pitts & Nerger	Electrophysiological correlates of perceptual reversals for three different types of bistable images
61 Reeves & Grayhem	Early scotopic dark adaptation; the square-root law
62 Roberson, Mackinney, Neitz, & Neitz	Analyzing the neural circuit for coding blue-yellow color vision by measuring central versus peripheral hue perception
63 Rossi, Weiser, Tarrant, & Roorda	Does correction of higher order aberrations improve visual performance in myopes?

64 Wagge & Olzak	Assessment of mechanisms of visual integration in center/surround stimuli using an uncertainty paradigm
65 Yahagi	Effects of Intrastromal Pocket Keratotomy (IPK)
66 Yang	Modeling modelfest data and luminance dependent CSFs based on implicit masking
67 Yokota & Yokota	Spatio-temporal frequency dependence of perceptual filling-in facilitation
68 Zele, Cao, & Pokorny	Dark-adapted rods alter cone temporal impulse response functions