Fall Vision Meeting, 2002

in cooperation with the Optical Society of America

Oct 24th - 27th, 2002

Palace of Fine Arts, San Francisco, CA, USA

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

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Overview

Immediately prior to the 2001 <u>Optical Society of America</u> Annual Meeting, the Vision and Color groups held a satellite meeting hosted by <u>UC Irvine</u>. The meeting was very successful, with much higher attendance than the Annual meeting.

The <u>Smith-Kettlewell Eye Research Institute</u> and <u>UC Berkeley</u>, <u>School of Optometry</u> are jointly sponsoring a expanded version of the fall vision meeting in cooperation with the Optical Society of America in <u>San Francisco</u> in October, 2002. The meeting will be held at the Palace of Fine Arts Lecture Theater, next to the <u>Exploratorium</u> interactive science museum.

This low-cost meeting incorprated the constituencies of the OSA Noninvasive Assessment topical meeting, and of the Vision, and Color groups from the <u>OSA Annual</u> <u>Meeting</u>, which decided not to participate in the Annual meeting in 2002. The meeting included the presentation of the <u>Tillyer Lecture</u>, in recognition of this longstanding award for excellence in vision science.

The meeting brought together those interested in quantitative visual science and those developing medical applications of this high-quality field in an appealing venue with extensive opportunities for cross-fertilization at the clinical/lab interface. The registration cost was low, and free for students. Accommodation costs are surprisingly low in this area of <u>San Francisco</u>, despite that fact that it is close to the <u>Bay</u>, the <u>Yacht Harbor</u> and the <u>Golden Gate Bridge</u>.

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Basic Vision

Vision. Chair: Miguel Eckstein, Vice-Chair: Ione Fine

Studies of general visual processing, such as spatial, temporal, stereoscopic, texture and motion processing.

Color Vision. Chair: Vivianne Smith, Vice Chair: Mike Webster

The science of color processing by the human visual system, from retina to perception.

Clinical Vision

Noninvasive Assessment of Visual Disorders. Conference Chair: Marilyn Schneck, Vice Chair: Anthony Norcia

The development of noninvasive techniques to assess disorders and their treatment at all levels of the human visual system.

Visual Optics and Imaging. Conference Chair: Larry Thibos, Vice Chair: Craig Abbey

Studies of the optics of the eye and optical imaging of the visual system, together with and applications of knowledge of visual processing in medicine and industry.

Local Organizing Committee:

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Fall Vision Meeting, 2002: Abstracts

The Fall Vision Meeting Meeting was held October 24-27, 2002, in San Francisco, CA in cooperation with the <u>Optical Society of America</u>. The meeting was organized by <u>Christopher Tyler</u>, with support from <u>Smith-Kettlewell Eye Research Institute</u> and the <u>School of</u> <u>Optometry</u>, <u>University of California</u>, <u>Berkeley</u>. The following are the abstracts of that meeting. <u>ARVO</u> holds the <u>copyright</u> to Journal of Vision, Vol. 2, No. 10, but not to the individual abstracts in that issue. ARVO has published these abstracts as a service to the vision science community.

<u>1</u>	Banks, Watt, & Ernst	Screen cues to flatness affect 3D percepts
<u>2</u>	Ward	A wide field, high dynamic range, stereographic viewer
<u>3</u>	Loomis	Using immersive virtual reality to study visual space perception, visual control of locomotion, and visually-based navigation
<u>4</u>	Dagnelie	Visual performance under simulated conditions of prosthetic vision
<u>5</u>	Thomas, Weerda, Vallines, & Greenlee	Comparison of fMRI responses during discrimination under certainty and uncertainty conditions
<u>6</u>	Kontsevich & Tyler	A single-channel model for spatio-temporal contrast sensitivity at low-to-medium spatial frequencies
Z	Wichmann	Modelling contrast transfer in spatial vision
<u>8</u>	Cohn	Of icebergs and spike codes: Titanic theories?
<u>9</u>	Sun, Lee, White, & Swanson	Examination of mechanisms underlying the frequency-doubling illusion
<u>10</u>	Baldassi & Verghese	Effects of spatial and feature cues on the tuning function for orientation and location
<u>11</u>	Boynton & Duncan	Visual acuity correlates with cortical magnification factors in human V1
<u>12</u>	Engel	FMRI measurements of changes in color and orientation tuning in V1
<u>13</u>	Heeger	Neuronal correlates of contrast detection and discrimination

<u>14</u>	Lee	How ganglion cells code luminance and chromatic information in natural enviroments
<u>15</u>	MacLeod	Color discrimination, color constancy and natural scene statistics
<u>16</u>	Endrikhovski	A computational model of color categorization based on statistics of natural images
<u>17</u>	Lappin & Tadin	Spatial and temporal limits in discriminating motion energy
<u>18</u>	Cantor & Schor	The flash-lag effect in moving vernier
<u>19</u>	Poggel, Kasten, Strasburger, & Sabel	Residual vision enhanced by visuo-spatial cueing: Attention effects on diagnosis and training of visual field defects in brain-lesioned patients
<u>20</u>	Mulligan & Stevenson	Speed-dependent delays for smooth eye movements
<u>21</u>	Murray, Beutter, Eckstein, & Stone	Saccadic targetting during visual search for letters
<u>22</u>	Yang	Visual countermanding paradigm: How demanding is it to generate a stop signal for eye movements using visual cues?
<u>23</u>	Rudd & Zemach	A quantitative model of achromatic color induction based on separate lightness and darkness filling-in processes
<u>24</u>	Chen & Tyler	Lateral masking with chromoluminance patterns
<u>25</u>	Davis & De Valois	Measuring the role of chromatic saturation and luminance contrast in color spreading using hue cancellation
<u>26</u>	Shevell & Cao	Temporal nulling of chromatic assimilation
<u>27</u>	Monnier & Shevell	s=S/(L+M) color shifts modulated by I=L/(L+M) contrast within patterned backgrounds
<u>28</u>	Bimler & Kirkland	Sex differences in color vision and the salience of color-space axes
<u>29</u>	Calver, Radhakrishnan, Pardhan, & OLeary	The effect of spherical aberration in myopic and non-myopic eyes: developing an optical model
<u>30</u>	Davies & Morland	Chromatic and achromatic spectral sensitivity in diabetes mellitus
<u>31</u>	Delahunt, Webster, Ma, & Werner	A long-term chromatic adaptation mechanism
<u>32</u>	Malkoc, Kay, & Webster	Individual differences in unique and binary hues
<u>33</u>	Mizokami, Werner, Crognale, & Webster	Color appearance and spectral bandwidth
34	Hirayama & Shinomori	Spatial frequency dependence of the luminous impulse response

<u>35</u>	Hong & Shevell	Brightness induction with patterned backgrounds
<u>36</u>	Lott, Haegerstrom-Portnoy, Schneck, & Brabyn	Reading performance in older adults: The SKI study
<u>37</u>	Schneck, Haegerstrom-Portnoy, Lott, & Brabyn	Predicting declines in vision and vision performance in older individuals
<u>38</u>	Fine	Reading eye movements in older adults
<u>39</u>	Sakai, Kannon, Hirata, & Usui	Influence of the eye refraction on the luminance-pupil diameter relationship
<u>40</u>	Shinomori & Werner	The impulse response of an S-cone pathway
<u>41</u>	Thibos, Bradley, & Applegate	Where is the far-point in aberrated eyes?
<u>42</u>	Tran, Kuo, & Wildsoet	The interacting effects of form-deprivation and myopic defocus imposed locally on the central and peripheral retina in chick eyes
<u>43</u>	Yew, Chan, & Wildsoet	Negative 30 D lenses behave like occluders in inducing myopia in young chicks
<u>44</u>	Кау	Color categories are not arbitrary
<u>45</u>	D'Zmura	Color scission and transparency
<u>46</u>	Morland & Hoffmann	Retinotopic organisation of the visual cortex in human albinism
<u>47</u>	Kiorpes & Movshon	Extended developmental time course for global visual functions in primates
<u>48</u>	Dobson, Miller, Harvey, & Mohan	Amblyopia in astigmatic preschool children
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<u>50</u>	Chien & Bronson-Castain	Lightness constancy in 4-month-old infants: With and without a white anchoring point cue
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<u>52</u>	Eskew, Wang, & Giulianini	Spectral asymmetries in detection mechanisms fed by S cone increments and decrements.
<u>53</u>	Dobkins & Gunther	Chromatic Contrast Sensitivity is Constrained by the Relative Number of L- vs. M- cones in the Eye
<u>54</u>	Smithson & Pokorny	Psychophysical assessment of the L:M weighting of inputs to the ON and OFF S-cone pathways
<u>55</u>	Miyahara, Szewczyk, & Holloway	Unique hues, Rayleigh match, and favorite colors: Why do we see different colors than others?

<u>56</u>	Angel, Randell, Volbrecht, & Nerger	The effect of rods on perceptive field sizes at 10 degrees eccentricity in the four retinal quadrants
<u>57</u>	Thomas & Buck	Generality of rod hue biases
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<u>59</u>	Stoner	Contextual influences of shadows on motion interpretation
<u>60</u>	Albright	Why do things look as they do?: Contextual influences on visual processing
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<u>62</u>	Gegenfurtner	Color vision and motor control
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<u>64</u>	De Valois, Takeuchi, & Hardy	The role of color in luminance motion analysis
<u>65</u>	Henry	Field studies of color perception in the natural environment
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<u>77</u>	Usui	VISIOME Environment: Web based platform on vision science
<u>78</u>	Shokhirev	Simulation of population activity induced by moving stimuli in the mammalian primary visual cortex
<u>79</u>	Disch, Takeuchi, & De Valois	Apparent speed of cycloidal motions

<u>80</u>	Ellis & Adelstein	Use of kinesthetic cues for cross modal transfer of movement coordinate information or "Why the left hand tells the right hand what it is doing"
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<u>87</u>	Fulton	Rod photoreceptor processes in pediatric disorders
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<u>93</u>	Morong, Westall, Buncic, Snead, Logan, & Weiss	Sweep visual evoked potentials in infants with infantile spasms before and during vigabatrin treatment
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<u>99</u>	Porciatti & Ventura	Screening for glaucoma with a user-friendly paradigm for the PERG called PERGLA.
<u>100</u>	Johnson, Takahashi, & Demirel	The ability of frequency doubling technology (FDT) perimetry to predict the onset of glaucomatous visual field loss for standard automated perimetry (SAP)
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