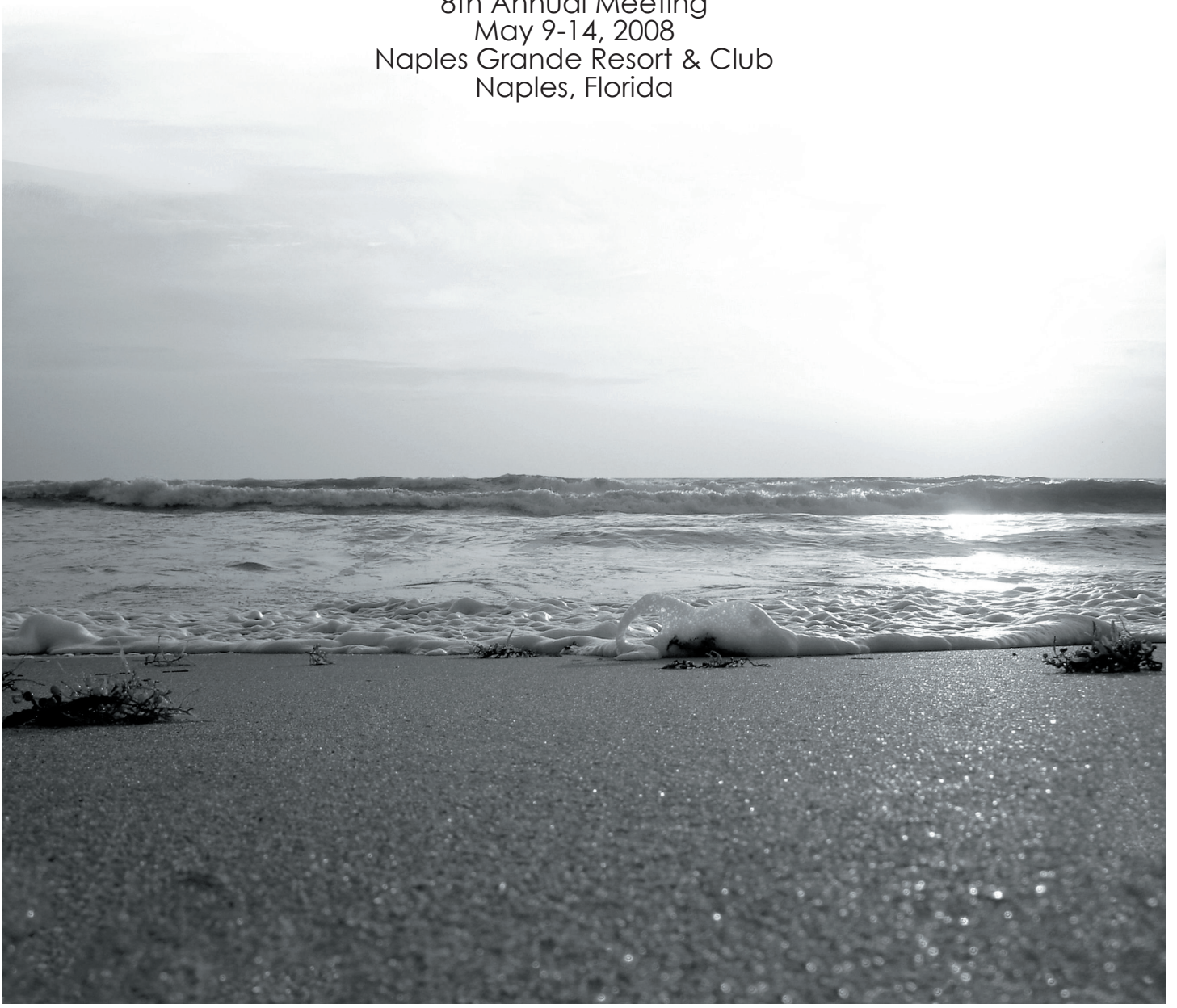
Vision Sciences Society

8th Annual Meeting
May 9-14, 2008
Naples Grande Resort & Club
Naples, Florida



Contents

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(Year represents end of term)

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Keynote Address

Unraveling fine-scale and cell-type specificity of visual cortical circuits

Saturday, May 10,
7:00 - 8:30 pm,
Royal Palm Ballroom

We have recently demonstrated that neighboring neurons in visual cortex are involved in distinctly different circuits. This includes both specificity of connections to particular cell types and the formation of fine scale subnetworks of relatively independent neuronal populations. This specificity creates challenges for gaining a mechanistic understanding of how cortical function contributes to visual perception. We have therefore developed technologies based on molecular biology, genetics, and virology that will allow fine scale microcircuitry to be more directly correlated with function. Other methods allow perturbations of the activity of distinct neural components so that their contributions to network function and perception can be more directly tested.

Edward Callaway, Ph.D.

Systems Neurobiology
Laboratories, Salk Institute

Edward M. Callaway received his PhD from CalTech in 1988, where he worked with David Van Essen on the development of the neuromuscular junction. He did post-doctoral work from 1988 to 1992 on visual cortex function and development at the Rockefeller University and at Duke University with the late Lawrence Katz. After three years on the faculty of the University of Colorado at Denver, he moved to the Salk Institute for Biological Studies in 1995, where he is now is Professor in the Systems Neurobiology Laboratories.

Callaway's research seeks to discover how neural circuits give rise to perception and behavior. He is well known and widely admired for his elegant and technically sophisticated work on the structure and function of visual cortex. In recent years, he has pioneered the development of novel techniques from molecular biology for the study of primate cerebral cortex. Striking among these is the use of viral vectors to introduce molecular machinery into neurons that both reveals the architecture of neuronal connections and allows neural circuit function to be manipulated experimentally.

Young Investigator Award

Dr. David Whitney

Department of Psychology and Center for Mind & Brain, University of California, Davis

Dr. David Whitney has been chosen as this year's recipient of the VSS Young Investigator Award in recognition of the extraordinary breadth and quality of his research. Using behavioral and fMRI measures in human subjects, Dr. Whitney has made significant contributions to the study of motion perception, perceived object location, crowding and the visual control of hand movements. His research is representative of the diversity and creativity associated with the best work presented at VSS.

The Young Investigator Award will be presented at the start of the Keynote Address on Saturday, May 10, 7:00 pm, in the Royal Palm Ballroom.

Meeting Schedule

Friday, May 9

11:00 am - 8:30 pm	Registration Open	*Royal Palm Foyer*
1:00 – 3:00 pm	Symposia Session 1	*Royal Palm 4, Royal Palm 5, Royal Palm 6-8, and Orchid 1*
3:00 - 3:30 pm	Coffee Break	*Royal Palm Foyer*
3:30 - 5:30 pm	Symposia Session 2	*Royal Palm 4, Royal Palm 5, Royal Palm 6-8, and Orchid 1*
5:30 – 7:30 pm	Opening Night Reception	*Vista Ballroom, Sunset Deck, Vista Deck*
5:30 – 8:30 pm	Evening Poster Session	*Vista Ballroom*

Saturday, May 10

7:30 am - 6:30 pm	Registration Open	*Royal Palm Foyer*
8:00 am - 8:30 pm	Coffee	*Royal Palm Foyer*
8:30 am – 12:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
8:30 am – 12:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
8:30 am – 6:30 pm	Exhibits Open	*Orchid Ballroom*
12:30 - 2:30 pm	Lunch Break	*Grab a lunch and head for the Beach! **
2:30 – 6:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
2:30 – 6:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
4:00 - 4:30 pm	Coffee Break	*Royal Palm Foyer*
7:00 – 8:30 pm	Keynote and Awards Ceremony	*Royal Palm Ballroom 4-5*

Sunday, May 11

7:30 am – 6:30 pm	Registration Open	*Royal Palm Foyer*
8:00 am - 8:30 pm	Coffee	*Royal Palm Foyer*
8:30 am - 12:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
8:30 am – 12:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
8:30 am – 6:30 pm	Exhibits Open	*Orchid Ballroom*
12:30 - 2:30 pm	Lunch Break	*Grab a lunch and head for the Beach! **
2:30 – 6:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
2:30 – 6:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
4:00 – 4:30 pm	Coffee Break	*Royal Palm Foyer*

Monday, May 12

7:30 am – 12:30 pm	Registration Open	*Royal Palm Foyer*
8:00 am - 8:30 pm	Coffee	*Royal Palm Foyer*
8:30 am - 12:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
8:30 am – 12:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
8:30 am – 12:30 pm	Exhibits Open	*Orchid Ballroom*
12:45 - 1:30 pm	Business Meeting	*Royal Palm Ballroom*
1:30 - 6:30 pm	Afternoon Break	*Grab a lunch and head for the Beach! **
6:30 – 8:30 pm	Demo Night BBQ	*Vista Ballroom, Sunset Deck, Vista Deck*
7:30 – 9:30 pm	Demo Night Demos	*Royal Foyer, Acacia Meeting Rooms*

** You can purchase a "grab-and-go" lunch in the Royal Palm Foyer or on the Sunset Deck*

Tuesday, May 13

7:30 am – 6:30 pm	Registration Open	*Royal Palm Foyer*
8:00 am - 8:30 pm	Coffee	*Royal Palm Foyer*
8:30 am - 12:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
8:30 am – 12:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
8:30 am – 6:30 pm	Exhibits Open	*Orchid Ballroom*
12:30 - 2:30 pm	Lunch Break	*Grab a lunch and head for the Beach! **
2:30 – 6:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
2:30 – 6:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8, Orchid Ballroom*
4:00 – 4:30 pm	Coffee Break	*Royal Palm Foyer*
9:30 pm –1:30 am	Club Vision	*Vista Ballrooms*

Wednesday, May 14

7:30 am – 12:30 pm	Registration Open	*Royal Palm Foyer*
8:00 am - 8:30 pm	Coffee	*Royal Palm Foyer*
8:30 am - 12:30 pm	Poster Sessions	*Royal Palm 1-3, Royal Palm 6-8*
8:30 am – 12:15 pm	Talk Sessions	*Royal Palm Ballroom 4-5 and Vista Ballroom*
12:30 pm	Meeting Ends	

** You can purchase a "grab-and-go" lunch in the Royal Palm Foyer or on the Sunset Deck*

New Abstract Numbering System

A new abstract numbering system has been implemented for this year that assigns a unique 4 to 5 digit number to each abstract based on when and where it is to be presented. The fomat of the new abstract numbering is AB.CD where the digits before the period indicate WHEN the presentation is given, while the digits after the period indicate WHERE. (A is the day, B is the time period, C is the room and D is the presentation number)

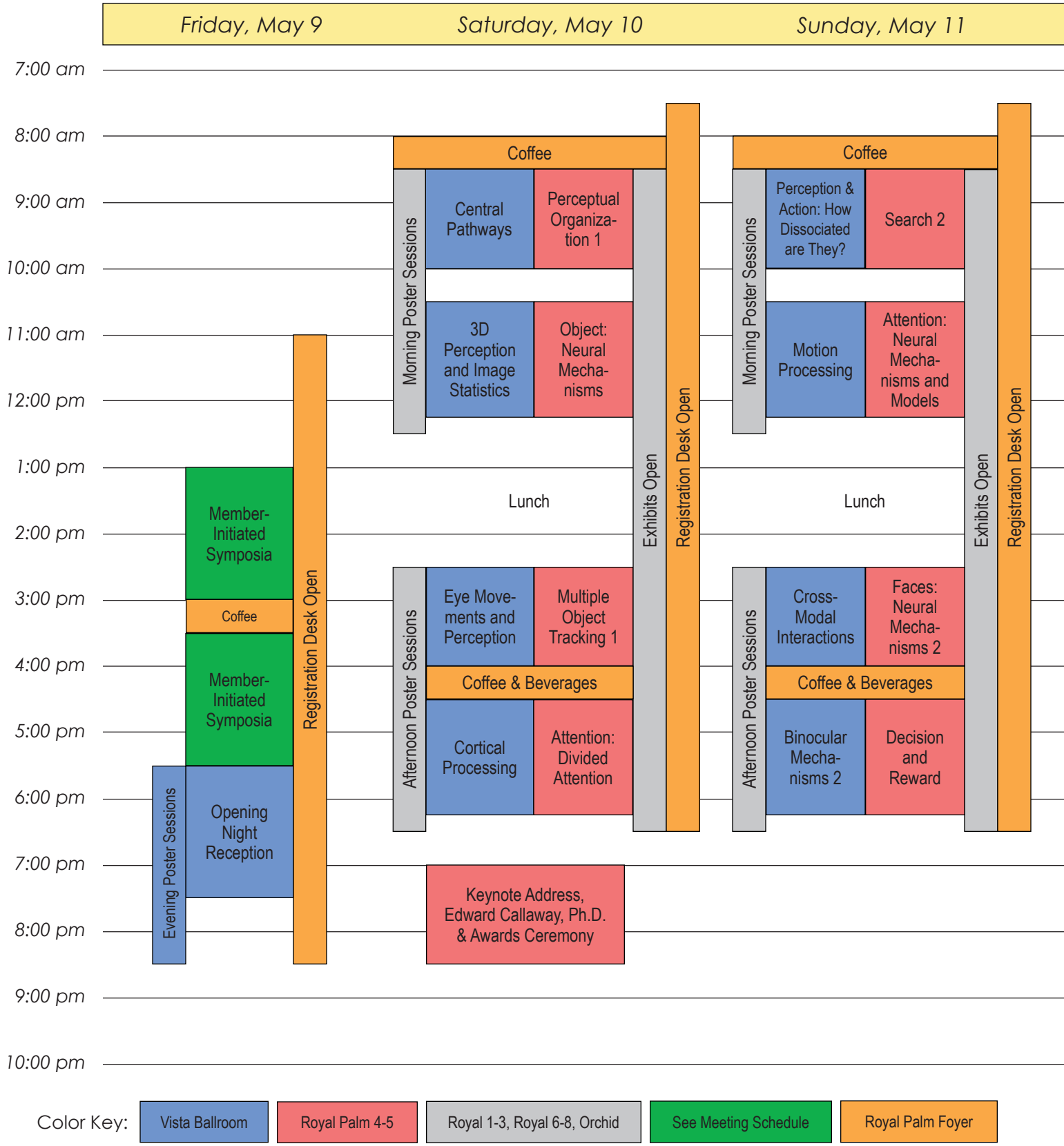
First Digit - Day (A)		Second Digit - Time Period (B)		Third Digit - Room (C)		Fourth/Fifth Digits - Number (D)	
1	Friday	1	Early AM talk session	1	Vista Ballroom	1, 2, 3...	For talks
2	Saturday	2	Late AM talk session	2	Royal Palm 4-5	01, 02, 03...	For posters
3	Sunday	3	AM poster session	3	Royal Palm 1-3		
4	Monday	4	Early PM talk session	4	Royal Palm 6-8		
5	Tuesday	5	Late PM talk session	5	Orchid Ballroom		
6	Wednesday	6	PM poster session				

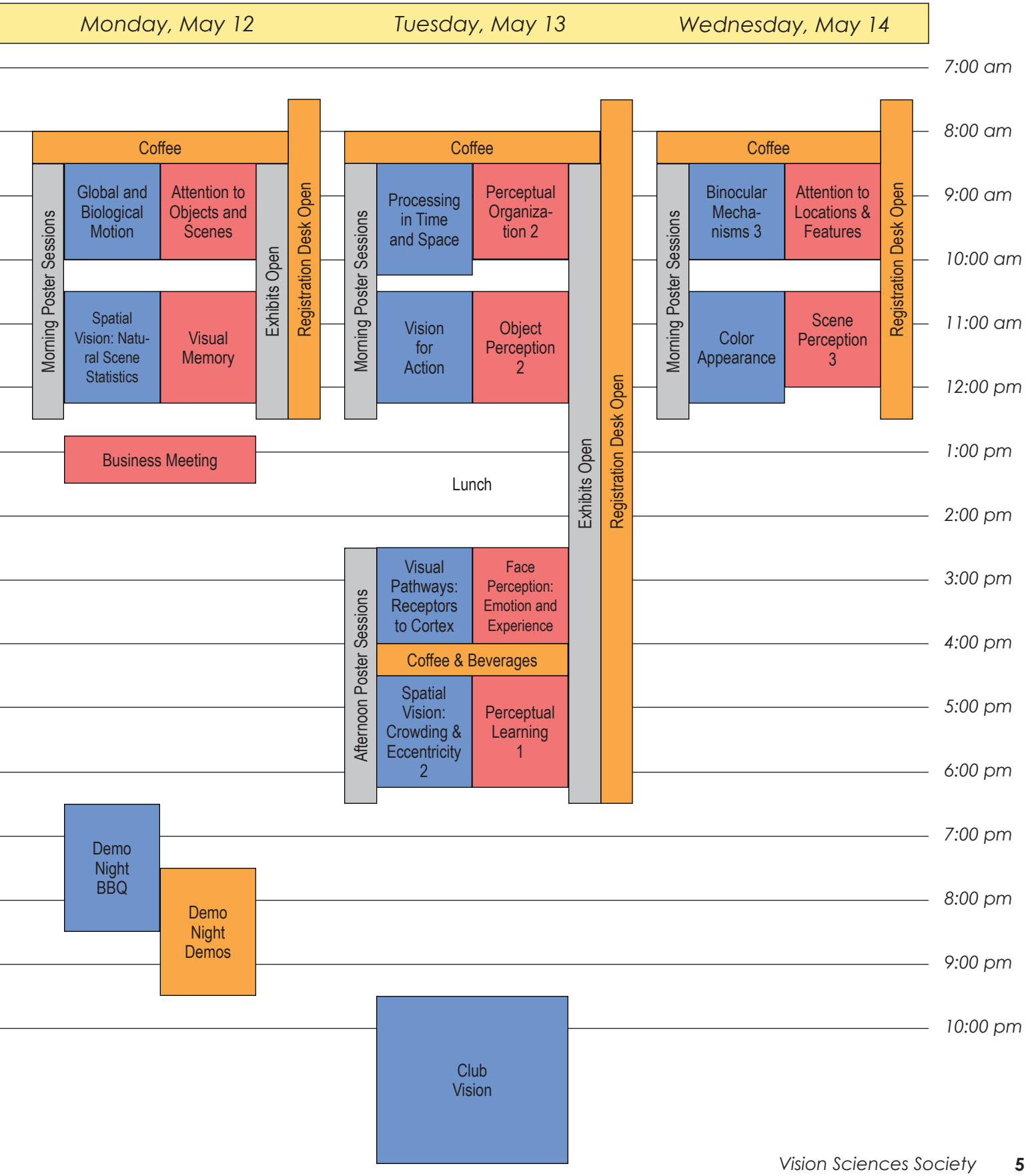
Examples:

21.16 Saturday, early AM talk, in Vista Ballroom, 6th talk
36.513 Sunday, PM poster, in Orchid Ballroom, poster board 13
53.306 Tuesday, AM poster, in Royal Palm 1-3, poster board 6

Note: 2 digits after the period for talks, 3 digits after the period for posters. With a little learning, the hope is that the numbering system will be an efficient guide to finding each presentation.

Schedule-at-a-Glance




Monday, May 12
Tuesday, May 13
Wednesday, May 14
7:00 am
8:00 am
9:00 am
10:00 am
11:00 am
12:00 pm
1:00 pm
2:00 pm
3:00 pm
4:00 pm
5:00 pm
6:00 pm
7:00 pm
8:00 pm
9:00 pm
10:00 pm
Coffee
Morning Poster Sessions
Global and Biological Motion
Attention to Objects and Scenes
Spatial Vision: Natural Scene Statistics
Visual Memory
Exhibits Open
Registration Desk Open
Business Meeting
Coffee
Morning Poster Sessions
Processing in Time and Space
Perceptual Organization 2
Vision for Action
Object Perception 2
Lunch
Exhibits Open
Registration Desk Open
Afternoon Poster Sessions
Visual Pathways: Receptors to Cortex
Face Perception: Emotion and Experience
Coffee & Beverages
Spatial Vision: Crowding & Eccentricity 2
Perceptual Learning 1
Coffee
Morning Poster Sessions
Binocular Mechanisms 3
Attention to Locations & Features
Color Appearance
Scene Perception 3
Registration Desk Open
Demo Night BBQ
Demo Night Demos
Club Vision

Poster Schedule

Friday Afternoon, May 9

Setup: 5:15 -5:30 pm
Session: 5:30 - 8:30 pm
Room: Vista Ballroom
- Attention: Selection over Time
- Motion: Integration, Flow, and Depth
- Object Perception: Neural Mechanisms
- Perception and Action: Hand Movements

Take down: 8:30 - 8:45 pm

Saturday Morning, May 10

Setup: 8:15 - 8:30 am
Session: 8:30 am - 12:30 pm
Room: Royal Palm Ballroom 1-3
- Binocular Mechanisms 1
- Eye Movements, Search and Attention
- Motion: Higher Mechanisms and Illusions

Room: Royal Palm Ballroom 6-8
- Attention: Selection and Modulation 1
- Faces: Inversion and Viewpoint Effects
- Multisensory Processing: Low Level

Room: Orchid Ballroom
- Faces: Learning and Expertise
- Faces: Lifespan Development
- Visual Working Memory 1

Take down: 12:30 - 12:45 pm

Saturday Afternoon, May 10

Setup: 2:15 - 2:30 pm
Session: 2:30 - 6:30 pm
Room: Royal Palm Ballroom 1-3
- Binocular Rivalry and Integration 1
- Faces: Other-race Effects
- Spatial Vision: Mechanisms 1

Room: Royal Palm Ballroom 6-8
- Lightness, Brightness and Luminance
- Perception and Action: Reaching and Grasping
- Search 1

Room: Orchid Ballroom
- Scene Perception 1
- Spatial Vision: Natural Images and Texture
- Temporal Processing and Dynamics

Take down: 6:30 - 6:45 pm

Sunday Morning, May 11

Setup: 8:15 - 8:30 am
Session: 8:30 am - 12:30 pm
Room: Royal Palm Ballroom 1-3
- Faces: Neural Mechanisms 1
- Perceptual Development across the Lifespan
- Spatial Vision: Crowding and Eccentricity 1

Room: Royal Palm Ballroom 6-8
- 3D Pictorial Cues
- Attention: Inattentional Blindness and Change Detection
- Perceptual Learning 2

Room: Orchid Ballroom
- Higher Cortical Processing
- Multiple Object Tracking 2
- Object Perception: Recognition and Categorization

Take down: 12:30 - 12:45 pm

Sunday Afternoon, May 11

Setup: 2:15 - 2:30 pm
Session: 2:30 - 6:30 pm
Room: Royal Palm Ballroom 1-3
- Attention: Object-based Selection
- Color Perception
- Perceptual Organization: Contours

Room: Royal Palm Ballroom 6-8
- Motion: Space and Speed
- Perception and Action: Goal Directed Movements
- Reading

Room: Orchid Ballroom
- Eye Movements
- Object Perception 1
- Smooth Pursuit and Perception

Take down: 6:30 - 6:45 pm

Monday Morning, May 12

Setup: 8:15 - 8:30 am
Session: 8:30 am - 12:30 pm
Room: Royal Palm Ballroom 1-3
- Faces: Emotion
- Perceptual Organization: 2D Shape
- Scene Perception 2

Room: Royal Palm Ballroom 6-8
- 3D Space Perception
- Attention: Crossmodal and Cognitive Effects
- Attention: Selection and Modulation 2

Room: Orchid Ballroom
- Binocular Rivalry and Integration 2
- Receptive Fields and Maps

Take down: 12:30 - 12:45 pm

Tuesday Morning, May 13

Setup: 8:15 - 8:30 am
Session: 8:30 am - 12:30 pm
Room: Royal Palm Ballroom 1-3
- 3D Stereopsis and Motion
- Attention: Interactions with Memory
- Attention: Theoretical and Computational Models

Room: Royal Palm Ballroom 6-8
- Faces: Wholes, Part, Configurations and Features
- Motion: Biological Motion

Room: Orchid Ballroom
- Saccadic Eye Movements
- Spatial Vision: Mechanisms 2

Take down: 12:30 - 12:45 pm

Tuesday Afternoon, May 13

Setup: 2:15 - 2:30 pm
Session: 2:30 am - 6:30 pm
Room: Royal Palm Ballroom 1-3
- Attention: Costs of Divided Attention
- Attention: Neural Mechanisms
- Perceptual Organization: Grouping and Segmentation

Room: Royal Palm Ballroom 6-8
- Motion: Spatial Interactions and Aftereffects
- Perception and Action: New Issues

Room: Orchid Ballroom
- Multisensory Processing: High Level
- Search 3

Take down: 6:30 - 6:45 pm

Wednesday Morning, May 14

Setup: 8:15 - 8:30 am
Session: 8:30 am - 12:30 pm
Room: Royal Palm Ballroom 1-3
- Attention: Inhibition and Capture
- Perceptual Learning 3

Room: Royal Palm Ballroom 6-8
- Faces: Adaptation and Context
- Perception and Action: Locomotion and Navigation
- Visual Working Memory 2

Take down: 12:30 - 12:45 pm

Poster Information

The Friday evening poster session is located in the Vista Ballroom (Lobby level). All other poster sessions are held on the Ballroom level in Royal Ballroom 1-3, Royal Ballroom 6-8, and Orchid Ballroom.

Posters should be put up at the beginning of a session and taken down at the end. Authors are expected to be present at their posters during the entire "Author Presents" time, but may be there longer (see schedule below).

Please be courteous and take down your poster promptly at the end of the session, so that the board is empty when the next presenter arrives to put up his or her poster.

Push pins are available for your use and are located at the Meeting Registration Desk in the Royal Palm foyer.

Author Presents Schedule

Friday Evening Poster Session: 5:30 - 8:30 pm
- 5:30 - 6:00 pm - All authors present
- 6:00 - 7:00 pm - Even numbered posters authors present
- 7:00 - 8:00 pm - Odd numbered posters authors present
- 8:00 - 8:30 pm - All authors present

Morning Poster Sessions
Saturday - Wednesday: 8:30 am -12:30 pm
- 8:30 - 9:00 am - All authors present
- 9:30 - 10:30 am - Even numbered posters authors present
- 10:30 - 11:30 am - Odd numbered posters authors present
- 12:00 - 12:30 pm - All authors present

Afternoon Poster Sessions
Saturday - Tuesday: 2:30 - 6:30 pm
- 2:30 - 3:00 pm - All authors present
- 3:30 - 4:30 pm - Even numbered posters authors present
- 4:30 - 5:30 pm - Odd numbered posters authors present
- 6:00 - 6:30 pm - All authors present

Talk Schedule

Saturday, May 10

Time	Vista Ballroom	Royal Ballroom 4-5
8:30 - 10:00 am	Central Pathways	Perceptual Organization 1
10:30 am - 12:15 pm	3D Perception and Image Statistics	Object: Neural Mechanisms
2:30 - 4:00 pm	Eye Movements and Perception	Multiple Object Tracking 1
4:30 - 6:15 pm	Cortical Processing	Attention: Divided Attention

Sunday, May 11

Time	Vista Ballroom	Royal Ballroom 4-5
8:30 - 10:00 am	Perception and Action: How Dissociated Are They?	Search 2
10:30 am - 12:15 pm	Motion Processing	Attention: Neural Mechanisms and Models
2:30 - 4:00 pm	Cross-Modal Interactions	Faces: Neural Mechanisms 2
4:30 - 6:15 pm	Binocular Mechanisms 2	Decision and Reward

Monday, May 12

Time	Vista Ballroom	Royal Ballroom 4-5
8:30 - 10:00 am	Global and Biological Motion	Attention to Objects and Scenes
10:30 am - 12:15 pm	Spatial Vision: Natural Scene Statistics	Visual Memory

Tuesday, May 13

Time	Vista Ballroom	Royal Ballroom 4-5
8:30 - 10:00 am	Processing in Time and Space (8:30 - 10:15 am)	Perceptual Organization 2
10:30 am - 12:15 pm	Vision for Action	Object Perception 2
2:30 - 4:00 pm	Visual Pathways: Receptors to Cortex	Face Perception: Emotion and Experience
4:30 - 6:15 pm	Spatial Vision: Crowding and Eccentricity 2	Perceptual Learning 1

Wednesday, May 14

Time	Vista Ballroom	Royal Ballroom 4-5
8:30 - 10:00 am	Binocular Mechanisms 3	Attention to Locations and Features
10:30 am - 12:15 pm	Color Appearance	Scene Perception 3 (10:30 am - 12:00 pm)

Speaker Information

The meeting rooms are equipped with a data/video projector and a projection screen. Presentations can be made from your Mac or PC laptop. A technician will be present in each room to handle any technical problems that may arise.

Please arrive at the Ballroom no less than 30 minutes before the start of your session. Presenters are welcome to test their presentations between talk sessions. Please give priority to presenters whose talk is scheduled for the subsequent session.

Elsevier/*Vision Research* Travel Awards

VSS congratulates this year's recipients of the 2008 Elsevier/*Vision Research* Travel Award. The Travel Awards will be presented at the start of the Keynote Address on Saturday, May 10, 7:00 pm in the Royal Palm Ballroom.

ELSEVIER

Peter Battaglia
University of Minnesota, Department of Psychology
Advisors: Paul Schrater, Daniel Kersten

Jason Haberman
University of California, Davis
Advisor: David Whitney

Grit Herzmann
Humboldt-University Berlin, Germany
Advisor: Werner Sommer

Po-Jang Hsieh
Dartmouth College, Psychological and Brain Sciences
Advisor: Peter Tse

Jie Huang
Brandeis University, Department of Psychology
Advisor: Robert Sekuler

Sung Jun Joo
Yonsei University, Graduate Program in Cognitive Science
Advisor: Sang Chul Chong

Min-Suk Kang
Vanderbilt University, Department of psychology
Advisor: Randolph Blake

Robyn Kim
UCLA
Advisor: Ladan Shams

Jonas Kubilius
MIT, McGovern Institute for Brain Research
Advisors: Nancy Kanwisher, Daniel D. Dilks

Tingting Liu
University of Minnesota, Department of Psychology, Eye & ENT Hospital of Fudan University, Department of Ophthalmology
Advisor: Sheng He

Lee Lovejoy
University of California San Diego, Salk Institute and Graduate Program in Neurosciences
Advisor: Rich Krauzlis

Tamar Makin
Hebrew University of Jerusalem, Department of Neurobiology, Life Sciences Institute
Advisor: Ehud Zohary

Travis Meyer
Wake Forest Medical Center
Advisor: Christos Constantinidis

Anirvan Nandy
University of Southern California, Department of Psychology
Advisor: Bosco S. Tjan

Tim Preston
University of Birmingham, School of Psychology
Advisor: Zoe Kourtzi

Constantin Rothkopf
University of Rochester, Center for Visual Science, Department of Brain and Cognitive Sciences
Advisors: Dana Ballard, Mary Hayhoe

Anna Seydell
University of Giessen, Germany
Advisor: Julia Trommershäuser

Yetta Kwailing Wong
Vanderbilt University
Advisor: Isabel Gauthier

Wei Wu
Duke University, Department of Neurobiology
Advisor: David Fitzpatrick

Serap Yigit
University of Washington, Cognition and Perception, Psychology Department
Advisor: John Palmer

6th Annual Demo Night

Monday, May 12, 6:30 – 9:30 pm
BBQ 6:30 – 8:30 pm Vista Ballroom, Vista Terrace and Sunset Deck
Demos 7:30 – 9:30 pm Royal Palm foyer, Acacia Meeting Rooms

Please join us Monday night for the 6th Annual VSS Demo Night, a spectacular night of imaginative demos, social interaction and delectable food. This year's BBQ will be held on the beautiful Sunset Terrace and Vista Deck overlooking the Naples Grande main pool. Demos will be located upstairs on the ballroom level in the Royal Ballroom foyer and Acacia Meeting Rooms.

Richard O. Brown, Arthur Shapiro and Shin Shimojo have curated 21 demonstrations of visual phenomena by VSS members, highlighting the important roles demonstrations play in vision research and education.

Demo Night is free for all registered VSS attendees. Meal tickets are not required, but you must wear your VSS badge for entry to the BBQ. Guests and family members of all ages are welcome to attend the demos, but must purchase a ticket for the BBQ . You can register your guests at any time during the meeting at the VSS Registration Desk located in the Royal Ballroom foyer. A desk will also be set up at the entrance to the BBQ in the Vista Ballroom beginning at 6:00 pm on Monday night.

Guest prices
Adults: $30
Youth (6-12 years old): $15
Children under 6: free

Demonstrations

Wide field of view HMD walking experience in Virtual Reality

Bryce Armstrong and Matthias Pusch; WorldViz LLC

New demo worlds by WorldViz will immerse participants at higher levels with a new high-speed wide area tracking system and new wide FOV HMD setup with improved resolution.

LITE Vision Demonstrations

Kenneth Brecher; Boston University

I will present the most recent Project LITE vision demonstrations (including ones not yet posted on the web) - both computer software and new physical objects.

The Blue Arcs – functional imaging of neural activity in your own retina

Richard O. Brown; The Exploratorium

A simple demonstration of the Blue Arcs of the Retina, a beautiful entoptic phenomenon with a long history (Purkinje 1825, Moreland 1968), which deserves to be more widely known.

An opti-mechanical demonstration of differential chromatic and achromatic flicker fusion

Gideon P. Caplovitz and Howard C. Hughes; Dartmouth College

We will present a classic dynamic demonstration of differential flicker fusion rates for achromatic and chromatic flicker, using birefringent materials and polarized light.

Stereo rotation standstill

Max R. Dürsteler; Zurich University Hospital

A rotating spoked wheel defined only by disparity cues appears stationary when fixating the center of rotation. With peripheral fixation, one can infer the wheel's rotation by tracking single spokes.

Sal, an embodied robotic platform for real-time visual attention, object recognition and manipulation

Lior Elazary, Laurent Itti, Rob Peters and Kai Chang; USC

An integrated robotic head/arm system, controlled by a pair of laptop computers ("dorsal" and "ventral"), will be able to locate, learn, recognize and grasp visual objects in real time.

"The impossibile but possibile transparency" and other new illusions

Simone Gori and Daniela Bressanelli; University of Trieste and University of Verona

We will demonstrate new motion illusions , including a new effect of transparency that arises in a special condition in which the colors combination contradicts the transparency rules.

A novel method for eye movement detection and fixation training

Parkson Leung, Emmanuel Guzman, Satoru Suzuki, Marcia Grabowecky and Steve Franconeri; Northwestern University

We will demonstrate a rapid contrast-reversing display of random-dots which appears uniform during fixation, but in which the random-dot pattern is perceived during eye movements or blinks.

3D shape recovery from a single 2D image

Yunfeng Li, Tadamasa Sawada, Yll Haxhimusa, Stephen Sebastian and Zygmunt Pizlo; Purdue University

We will demonstrate software that can take a single 2D image of a 3D scene and recover 3D shapes of objects in the scene, based on contours of the objects extracted by hand or automatically.

Rolling perception without rolling motion

Songjoo Oh and Maggie Shiffrar; Rutgers-Newark

We will show that contextual cues systematically trigger the perception of illusory rotation in optically ambiguous, moving homogeneous circles, in which visual cues to rotation are absent.

Pip and pop

Chris Olivers, Erik van der Burg, Jan Theeuwes and Adelbert Bronkhorst; Vrije Universiteit Amsterdam

In dynamic, cluttered displays, a spatially non-specific sound ("pip") dramatically improves detection and causes "pop out" of a visual stimulus that is otherwise very difficult to spot.

The Phantom Pulse Effect Revisited

David Peterzel; UCSD, SDSU, VA Hospital

The "phantom pulse effect", in which rapid mirror reversals of one's body can evoke powerful and unusual visual-tactile, has been optimized and will be demonstrated by two distinct methods.

Mega suppression (aka Granny Smith illusion)

Dr Yury Petrov and Olga Meleshkevich; Northeastern University

A brief change of an object's color is completely masked when an object of a matching color is simultaneously flashed nearby, when presented in the visual periphery.

Strong percepts of motion through depth without strong percepts of position in depth

Bas Rokers and Thad Czuba; The University of Texas at Austin

Binocularly anticorrelated random dot displays yield poor or nonexistent percepts of depth, but motion through depth percepts for the same stimuli are relatively unaffected.

Perpetual collision, long-range argyles, and other illusions

Arthur Shapiro and Emily Knight; Bucknell University

We will show novel interactive visual effects. Perpetual collisions illustrate global motion percepts from local changes at boundaries. Long-range argyles show strong lightness/brightness differences over large distances.

Illusions that illustrate fundamental differences between foveal and peripheral vision

Emily Knight, Arthur Shapiro and Zhong-Lin Lu; Bucknell University and USC

We will present a series of new interactive displays designed to test the hypothesis that peripheral vision contains less precise spatial and temporal phase information than foveal vision.

Smile Maze:Real-time Expression Recognition Game

Jim Tanaka, Jeff Cockburn, Matt Pierce, Javier Movellan and Marni Bartlett; University of Victoria

Smile Maze is an interactive face training exercise, incorporating the Computer Expression Recognition Toolbox developed at UCSD, in which players must produce target facial expressions to advance.

The Rubber Pencil Illusion

Lore Thaler; The Ohio State University

I will demonstrate the Rubber Pencil Illusion. When a pencil is held loosely and wiggled up and down in a combination of translatory and rotational motion, it appears to bend.

Edgeless filling-in and paradoxical edge suppression

Christopher Tyler; Smith-Kettlewell Eye Research Institute

I will demonstrate that 'edgeless' afterimages (Gaussian blobs) appear much more readily than sharp-edged ones, which exhibit a prolonged appearance delay. This is the reverse of edge-based filling-in.

Perception of depth determines the illusory motion of subjective surfaces within a wire cube

Albert Yonas; University of Minnesota

When 3 sides of a concave wire cube are viewed monocularly in front of a surface with minimal texture, it most often appears convex. When the viewer moves, both the cube and the surface appear to rotate.

Attendee Resources

ATM

An ATM is located in the hotel's main lobby.

Baggage Check

Bags can be checked with the Bell hop in the main lobby.

Business Center

The Business Center is located in the Orchid Foyer.

Child Daycare

Daycare is available through the Naples Grande Kids Club. Half day, full day and evening programs are available. Reservations should be made in advance by calling 239.597.3232, ext. 5612.

Morning Session: 8:30 am - 1:00 pm

Morning session includes a trip through the winding mangrove forest for a visit to the secluded beach, a variety of activities and lunch at the beach.

Cost: $40 first child; $20 each additional child from same family

Afternoon Session: 1:00 pm - 4:00 pm

Afternoon session includes swimming and activities at the Mangrove Mountain Pool, arts and crafts and a tasty treat. Bring a swimsuit for the afternoon session.

Cost: $35 first child; $18 each additional child from same family

Full Day: 8:30 am - 4:00 pm

Cost: $65 first child; $33 each additional child from same family

Kids Night Out: 6:00 - 9:00 pm

Kids Night Out offers a themed evening party for kids 4 - 12 including dinner, games, activities and a movie.

Cost: $45 a child

Kids Club will be offered on the following days for VSS attendees:

Friday, May 9

Afternoon session (1:00 - 4:00 pm)

Kids Night out (6:00 - 9:00 pm) VSS evening Poster Session and Reception runs from 5:30 - 8:30 pm

Saturday, May 10

Morning session (8:30 am - 1:00 pm)
Afternoon session (1:00 - 4:00 pm)
Full Day (8:30 am - 4:00 pm)
Kids Night Out (6:00 - 9:00 pm) VSS Keynote Address and Awards Ceremony runs from 7:00 - 8:30 pm

Sunday, May 11

Kids Club is closed for Mother's Day

Monday, May 12

Morning session (8:30 am - 1:00 pm)

Tuesday, May 13

Morning session (8:30 am - 1:00 pm)

Afternoon session (1:00 - 4:00 pm)

Full Day (8:30 am - 4:00 pm)

Wednesday, May 14

Morning session (8:30 am - 1:00 pm)

The Naples Grande Kids Club is operated by the Naples Grande Hotel.

Copying and Printing

Copying and printing can be done at the Hyatt Business Center, located near the reception desk in the upper lobby.

The nearest FedEx Kinko's is approximately 2.5 miles away at 890 Neapolitan Way (cross street Tamiami Trail).

Food Service

Complimentary coffee and tea will be available each morning in the Royal Palm Foyer. Coffee, tea, lemonade and sodas will also be served each afternoon between afternoon talk sessions.

Café Vision

Cash stations will be set up in the Royal Palm Foyer during breakfast and also outside on the Sunset Deck for lunch. Breakfast service is available from 7:30 - 9:30 am daily. Lunch service is available from 12:30 - 2:30 pm Saturday through Tuesday.

The VSS schedule gives a generous two-hour lunch period this year so that you can take advantage of the beautiful surroundings and amenities available at the Naples Grande. All Naples Grande facilities are open to all VSS attendees and their guests. Grab a lunch and walk down the path through the natural mangrove estuary to enjoy a break at the beach. Electric carts also run continuously from the Hotel to the beach and back.

Spressi

Located in the resort lobby, offering a selection of hot coffee drinks and teas, light breakfast and lunch fare to go.

Hours: 6:00 am - 6:00 pm

Paradise Grill
Located at the beach, serving salads, sandwiches, snacks and refreshing beverages.

Hours: 11:00 am - 5:00 pm Food
11:00 am - Sunset Beverage

Palm Terrace Pool Bar & Grill
Informal poolside bar serving salads, sandwiches, hamburgers and snacks.

Hours: 11:00 am - 5:00 pm Food
11:00 am - 6:00 pm Beverage

Aura
Located in the resort lobby, featuring innovative and sumptuous menus for breakfast, lunch and dinner. On Mothers day there will be a plated brunch from 12:00 pm - 4:00 pm.

Hours: 7:00 - 11:00 am Breakfast (Sundays till 12:00 pm)
11:30 am - 2:30 pm Lunch (Sundays open at 12:00 pm)
6:00 - 10:00 pm Dinner

Aura Bar
Hours: 12:00 pm - 12:00 am

Internet Access

Free Internet access is available on the Lobby level of the hotel, which includes the bar and restaurant areas.

The Cyber Vision Internet Café (formerly located on the balcony level of the Sarasota Municipal Auditorium) is now located in the Orchid Ballroom foyer. The Orchid Ballroom foyer is located on the Ballroom level where most poster and talk sessions are held. Free wireless Internet access and Internet terminals are provided.

Please note that Internet access on the Lobby and Ballroom levels are different wireless networks and may require that you connect to a different wireless access point.

Internet access is not provided in the poster and talk meeting rooms.

Internet access can be purchased in your hotel room for $9.95 per day.

Lost and Found

Lost and found is located at the Meeting Registration desk in the Royal Palm Foyer.

Message Center

Messages for registrants can be left and retrieved at the Registration Desk. A bulletin board will be available in the Royal Palm Foyer for announcements and job postings.

Parking

Complimentary self-parking is available inside the garage of the Naples Grande.

Shipping

To ship your poster or other items home from the meeting ask for the Concierge at the front desk of the Naples Grande.

How to Contact Us

If you need to reach VSS or meeting personnel while at the meeting, call ext. 6088 from a house phone, or from outside the hotel, call 239-597-3232, ext. 6088.

Don't Miss Club Vision

Tuesday, May 15, 9:30 pm – 1:30 am, Vista Ballroom and Sunset Deck

Each year the climax of the VSS social program takes place on the last night of the conference. In addition to a great sound system, special lighting effects, a cash bar, this year's Club Vision will feature a professional DJ.

The wearing of glowing or flashing accessories has become a tradition for this event and we will again be distributing free glow-in-the-dark necklaces and bracelets at the event. We encourage you to also bring your own creative accessories.

Dance and party with us until 1:30 am.

Exhibitors

VSS recognizes the following companies who are exhibiting at VSS 2008. Thank you for your participation and support.

Exhibit Hours

Saturday, May 10, 8:30 am – 6:30 pm
Sunday, May 11, 8:30 am – 6:30 pm
Monday, May 12, 8:00 am – 12:30 pm
Tuesday, May 13, 8:30 am – 6:30 pm

All exhibits are located in the Orchid Ballroom.

Applied Science Laboratories

For over 30 years, Applied Science Laboratories (ASL) has been providing application-based eye tracking solutions that match the discerning needs of researchers worldwide. ASL was the first company to develop many new innovations including the Mobile Eye, a completely tetherless system for both indoor and outdoor applications.

ASL's continues to integrate with new technologies to meet its continuing mission of advancing the understanding of eye movement and dynamics. ASL's range of systems represents the most complete line of eye measurement and recording equipment available today. ASL's technical and customer support are unmatched and is the hallmark of its industry leadership.

Arrington Research, Inc.

Arrington Research has been providing reliable affordable eye trackers for the research market worldwide for over 10 years. ViewPoint EyeTracker® systems are the easiest and best value available and include light-weight head mounted, HMD and head fixed systems. All systems include a Software Developers Kit (SDK), real-time Ethernet & serial communication, built-in stimulus presentation, post-hoc data analysis tools, a MATLAB toolbox, many other 3rd Party product interfaces and examples.

Cambridge Electronic Design Ltd

Data acquisition, analysis and experiment control systems. Applications include intracellular and extracellular electrophysiology, spike shape analysis, LTP / LTD, TMS, complex stimulus generation, vision research, behavioural studies, evoked response, signal averaging, spectral analysis, paperless chart recording and teaching systems.

Features include import of common data file formats, on and off-line multi-channel spike template matching and automatic detection of data features with extraction of measurements to XY plots or data channels. Data can also be exported to spreadsheet packages and Matlab.

Systems can be customised by users who wish to add their own routines and automate repetitive tasks.

The MIT Press

The MIT Press publishes many books and journals dedicated to the vision sciences, visual neuroscience and cognitive science, perception and related fields. Please visit our exhibit area (Booth #10) to receive a 20% discount on our newest and most relevant titles in the field including: Chalupa and Williams (eds.)/ Eye, Retina and Visual System of the Mouse (forthcoming June 2008), Pizlo/ 3D Shape, Arp/ Scenario Visualization and Pylyshyn/ Things and Places.

Oxford University Press

Please visit our booth, where you can save 20% off all of our titles, including Luck: Visual Memory, Shipley: Understanding Events, Wright: Orienting of Attention, Howard: Seeing in Depth, Bachmann: Experimental Phenomena of Consciousness, Peterson: In the Mind's Eye, Haggard: Sensorimotor Foundations of Higher Cognition, Driver: Mental Processes in the Human Brain, the new paperback version of Spivey: The Continuity of Mind, Rizzolatti: Mirrors in the Human Brain, Wong: Eye Movement Disorders, the second edition of Milner: The Visual Brain in Action, Kuehni: Color Ordered, and Kosslyn: Clear and to the Point.

SensoMotoric Instruments

SensoMotoric Instruments designs advanced video eye tracking systems that combine ease of use and flexibility with advanced technology. SMI products offer the ability to measure gaze position, saccades, fixations, pupil size, torsion, etc. This includes fully remote systems, binocular high-speed/high-precision, and FMRI/MEG compatible systems. New for 2008: Experiment Center 360°, offering a simple solution to stimulus presentation, data acquisition and analysis.

SR Research Ltd.

SR Research, makers of the EyeLink Hi-Speed eye tracker line, have been developing advanced eye tracking technologies since 1992. The new EyeLink 1000 is a high resolution 1000 Hz video-based eye tracker available in either a remote or mirrored optics configuration. The EyeLink II is a head-mounted 500 Hz high-speed binocular eye tracker with ultra low noise and extremely high spatial resolution. Please visit our website at http://www.sr-research.com for details on our eye tracking hardware and software product range.

Starr Life Sciences Corp.

STARR's cornerstone product, the MouseOx™, is the world's first and only pulse oximeter for mice and rats. The MouseOx is more than just a pulse oximeter. It provides real-time, beat-by-beat measurements of Pulse Rate, Breath Rate, Arterial Oxygen Saturation and Blood Flow, all from one simple, easy to use, non-invasive sensor applied to the subject's leg or paw. The MouseOx accurately measures physiologic parameters on Adult through Neonatal Mice and Rats with heart rate ranges from 90-900 beats per minute.

WorldViz

WorldViz is an industry leader in interactive virtual reality solutions. The company's flagship products are VIZARD, the VR communities favored interactive 3D content creation software, and PPT X4, the most cost effective wide-area tracking system currently available. WorldViz provides high quality, low-cost immersive 3D products to researchers, educators, designers, manufacturers, and other professionals, integrating all common VR products on the market and delivering complete turnkey solutions.

Member-Initiated Symposia

Symposium summaries are presented below. See the Abstracts book for individual presentation abstracts.

Schedule Overview

Friday, May 9, 1:00 - 3:00 pm

S1: Perceptual expectations and the neural processing of complex images, *Royal Palm Ballroom 6-8*

S2: Cortical organization and dynamics for visual perception and beyond, *Royal Palm Ballroom 4*

S3: Crowding, *Royal Palm Ballroom 5*

S4: Visual Memory and the Brain, *Orchid Ballroom 1*

Friday, May 9, 3:30 - 5:30 pm

S5: Bayesian models applied to perceptual behavior, *Royal Palm Ballroom 4*

S6: Action for perception: functional significance of eye movements for vision, *Orchid Ballroom 1*

S7: The past, present, and future of the written word, *Royal Palm Ballroom 5*

S8: Surface material perception, *Royal Palm Ballroom 6-8*

S1: Perceptual expectations and the neural processing of complex images.

Friday, May 9, 1:00 - 3:00 pm, Royal Palm Ballroom 6-8

Organizer: Bharathi Jagadeesh; University of Washington

Presenters: Moshe Bar, Bharathi Jagadeesh, Nicholas Furl, Valentina Daelli and Robert Shapley

Symposium Summary

The processing of complex images occurs within the context of prior expectations and of current knowledge about the world. A clue about an image, "think of an elephant", for example, can cause an otherwise nonsensical image to transform into a meaningful percept. The informative clue presumably activates the neural substrate of an expectation about the scene that allows the visual stimulus representation to be more readily interpreted. In this symposium we aim to discuss the neural mechanisms that underlie the use of clues and context to assist in the interpretation of ambiguous stimuli. The work of five laboratories, using imaging, single-unit recording, MEG, psychophysics, and network models of visual processes all show evidence of the impact of prior knowledge on the processing of visual stimuli.

In the work of Bar, we see evidence that a short latency neural response may be induced in higher level cortical areas by complex signals traveling through a fast visual pathway. This pathway may provide the neural mechanism that modifies the processing of visual stimuli as they stream through the brain. In the work of Jagadeesh, we see a potential effect of that modified

processing: neural selectivity in inferotemporal cortex is sufficient to explain performance in a classification task with difficult to classify complex images, but only when the images are evaluated in a particular framed context: Is the image A or B (where A or B are photographs, for example a horse and a giraffe). In the work of Furl, human subjects were asked to classify individual exemplars of faces along a particular dimension (emotion), and had prior experience with the images in the form of an adapting stimulus. In this context, classification is shifted away from the adapting stimulus. Simultaneously recorded MEG activity shows evidence reentrant signal, induced by the prior experience of the prime, that could explain the shift in classification. In the work of Treves, we see examples of networks that reproduce the observed late convergence of neural activity onto the response to an image stored in memory, and that can simulate mechanisms possibly underlying predictive behavior. Finally, in the work of Shapley, we see that simple cells in layer 2/3 of V1 (a major input layer for intra-cortical connections) paradoxically show dynamic nonlinearities.

The presence of a dynamic nonlinearity in the responses of V1 simple cells indicates that first-order analyses often capture only a fraction of neuronal behavior, a consideration with wide ranging implications for the analysis in visual responses in more advanced cortical areas. Signals provided by expectation might influence processing throughout the visual system to bias the perception and neural processing of the visual stimulus in the context of that expectation.

The work to be described is of significant scientific merit and reflects recent work in the field; it is original, forcing re-examination of the traditional view of vision as a method of extracting information from the visual scene in the absence of contextual knowledge, a topic of broad interest to those studying visual perception.

Presentations

The proactive brain: using analogies and associations to generate predictions

Moshe Bar; Harvard Medical School

Neural selectivity in inferotemporal cortex during active classification of photographic images.

Bharathi Jagadeesh; University of Washington

Experience-based coding in categorical face perception

Nicholas Furl; University College London

Categorical perception may reveal cortical adaptive dynamics

Valentina Daelli; SISSA

Contrast-sign specificity built into the primary visual cortex, V1

Robert Shapley; NYU

S2: Cortical organization and dynamics for visual perception and beyond

Friday, May 9, 1:00 - 3:00 pm, Royal Palm Ballroom 4

Organizer: Zoe Kourtzi; University of Birmingham

Presenters: Martin I. Sereno, Uri Hasson, Wim Vanduffel, Charles E. Connor, Geoffrey M. Boynton and Pieter R. Roelfsem

Symposium Summary

The symposium aims to showcase state-of-the-art work and methods for studying the cortical dynamics that mediate complex and adaptive behaviours.

Extensive work in anatomy, neurophysiology and brain imaging has approached this challenge by studying the topography and neural function of discrete cortical structures in the human and non-human primate brain. This approach has been very successful in generating a roadmap of the primate brain:

identifying a large number of different cortical areas associated with different functions and cognitive abilities. However, understanding how the brain generates complex and adaptive behaviours entails extending beyond

isolated cortical centres and investigating the spatio-temporal dynamics that underlie information processing within and across cortical networks.

Recent developments in multi-site neurophysiological recordings and stimulation combined with advances in brain imaging have provided powerful methods for studying cortical circuits and novel insights into cortical dynamics.

The symposium will bring together pioneers in the study of cortical circuits in the human and the monkey brain and combine evidence from interdisciplinary approaches: physiology, imaging, computational modelling.

First we will present brain imaging work that characterizes the common principles of spatial and temporal organization across and beyond the human visual cortex (Sereno, Hasson). Second, we will discuss studies that delineate the causal interactions within these cortical circuits combining fMRI and microstimulation (Vanduffel). Third, we will discuss neurophysiological evidence for the functional role of these spatiotemporal interactions in the integration of sensory information to global percepts for visual recognition and actions (Connor). Fourth, we will present brain imaging work showing that cortical circuits adapt to the task demands and the attentional state of the observer (Boynton). Finally, we will present computational approaches investigating how attention and learning shape interactions within cortical circuits for adaptive behaviour (Roelfsema).

Thus, the symposium will serve as a forum for discussing novel evidence on cortical organization and dynamics emerging from current human and animal research and a tutorial for interdisciplinary state-of-the-art methods for research in this field. As such, the symposium will target a broad audience of researchers and students in the vision sciences society interested in understanding the link between brain and behaviour.

Presentations

Finding the parts of the cortex
Martin I. Sereno; UCL and Birkbeck, London

A hierarchy of temporal receptive windows in human cortex
Uri Hasson; New York University

Investigating causal functional interactions between brain regions by combining fMRI and intracortical electrical microstimulation in awake behaving monkeys.
Wim Vanduffel; Massachusetts General Hospital and K.U. Leuven Medical School

Spatiotemporal integration of object structure information
Charles E. Connor; John Hopkins University School of Medicine

Feature-Based Attention in Human Visual Cortex
Geoffrey M. Boynton; University of Washington

How attentional feedback guides learning of sensory representations
Pieter R. Roelfsema; Netherlans Institute for Neuroscience

S3: Crowding

Friday, May 9, 1:00 - 3:00 pm, Royal Palm Ballroom 5

Organizer: Denis G. Pelli; New York University

Presenters: Patrick Cavanagh, Brad C. Motter, Yury Petrov, Joshua A. Solomon and Katharine A. Tillman

Symposium Summary

Crowding is a breakdown of object recognition. It happens when the visual system inappropriately integrates features over too large an area, coming up with an indecipherable jumble instead an object. An explosion of new experiments exploit crowding to study object recognition by breaking it. The five speakers will review past work, providing a tutorial introduction to crowding, and will describe the latest experiments seeking to define the limits of crowding and object recognition. The general question, including "integration", "binding", "segmentation", "grouping," "contour integration", and "selective attention", is a burning issue for most members of VSS.

Presentations

Crowding: When grouping goes wrong
Patrick Cavanagh; Harvard University and LPP, Université Paris Descartes

Correlations between visual search and crowding
Brad C. Motter; Veterans Affairs Medical Center and SUNY Upstate Medical University

Locus of spatial attention determines inward-outward anisotropy in crowding
Yury Petrov; Northeastern University

Context-induced acuity loss for tilt: If it is not crowding, what is it?
Joshua A. Solomon; City University, London

The uncrowded window for object recognition
Katharine A. Tillman; New York University

S4: Visual Memory and the Brain

Friday, May 9, 1:00 - 3:00 pm, Orchid Ballroom 1

Organizer: Marian Berryhill; University of Pensylvania

Presenters: Lynn C. Robertson, Yaoda Xu, Yuhong Jiang; Neil Muggleton and Marian E. Berryhill

Symposium Summary

Focus: Visual memory describes the relationship between perceptual processing and the storage and retrieval of the resulting neural representations. Visual memory occurs over a broad time rangeof scenes across eye movements - to years - in order to visually navigate to a previously visited location or to recognize an old friend. How does the brain encode, store, and retrieve theserepresentations? What neural mechanism limits the capacity and resolution of visual memory? Do the same neural areas participate in short-term and long-term visual memory? Do particular neural regions, such as the intraparietal sulcus, participate only in visual memory, or does it have a more generally role in attentionally demanding tasks such as binding and multi-object tracking? Are different brain areas critically involved in storing different visual materials, such as simple colors or complex scenes? These topics have only begun to be studied; the purpose of this symposium is to discuss the latest research and current problems facing our understanding of visualmemory. Investigators in this area of research employ a variety of techniques such as the lesion method (neuropsychology and TMS), neuroimaging (fMRI, ERP), and behavioral studies.

Timeliness: The finding that the intraparietal sulcus may limit the capacity of visual short-term memory is an example of a topic that has been published in prominent journals, thereby fueling new studies andgenerating broad interest. Moreover, this general topic of the neural basis of visual memory relates to several other timely topics in the visual cognition literature including: neural areas involved inmulti-object tracking, attention, scene perception, navigation, and long-term memory.

Audience: This symposium would be accessible to a broad VSS Audience as it includes both perceptual and cognitive processing. Furthermore, by including speakers who come from a variety ofmethodological backgrounds, including neuropsychology and neuroimaging. Both students and seasoned researchers will find it of interest. The audience will gain a better understanding of visualcognition and of current methodological techniques being used to understand brain-behavior relationships.

Presentations

Forms of visual representation in unattended space: neuropsychological evidence
Lynn C. Robertson; UC Berkeley

Dissociable parietal mechanisms supporting visual short-term memory for objects
Yaoda Xu; Yale University

Talk by Yuhong Jiang
Yuhong Jiang; University of Minnesota

Migrating Memories: Remembering what comes next
Neil Muggleton; University College London

When was I Where?
Marian E. Berryhill; University of Pennsylvania

S5: Bayesian models applied to perceptual behavior

Friday, May 9, 3:30 - 5:30 pm, Royal Palm Ballroom4

Organizer: Peter Battaglia; University of Minnesota

Presenters: Alan Yuille, David Knill, Paul Schrater, Tom Griffiths, Konrad Koerding and Peter Battaglia

Symposium Summary

This symposium will provide information and methodological tools for researchers who are interested in modeling perception as probabilistic inference, but are unfamiliar with the practice of such techniques. In the last 20 years, scientists characterizing perception as Bayesian inference have produced a number of robust models that explain observed perceptual behaviors and predict new, unobserved behaviors. Such successes are due to the formal, universal language of Bayesian models and the powerful hypothesis-evaluation tools they allow. Yet many researchers who attempt to build and test Bayesian models feel overwhelmed by the potentially steep learning curve and abandon their attempts after stumbling over unintuitive obstacles. It is important that those scientists who recognize the explanatory power of Bayesian methods and wish to implement the framework in their own research have the tools, and know-how to use them, at their disposal. This symposium will provide a gentle introduction to the most important elements of Bayesian models of perception, while avoiding the nuances and subtleties that are not critical. The symposium will be geared toward senior faculty and students alike, and will require no technical prerequisites to understand the major concepts, and only knowledge of basic probability theory and experimental statistics to apply the methods. Those comfortable with Bayesian modeling may find the symposium interesting, but the target audience will be the uninitiated.

The formalism of Bayesian models allows a principled description of the processes that allow organisms to recover scene properties from sensory measurements, thereby enabling a clear statement of experimental hypotheses and their connections with related theories. Many people believe Bayesian modeling is primarily for fitting unpleasant data using a prior: this is a misconception that will be dealt with! In previous attempts to correct such notions, most instruction about probabilistic models of perception falls into one of two categories: qualitative, abstract description, or quantitative, technical application. This symposium constitutes a hybrid of these categories by phrasing qualitative descriptions in quantitative formalism. Intuitive and familiar examples will be used so the connection between abstract and practical issues remains clear.

The goals of this symposium are two-fold: to present the most current and important ideas involving probabilistic perceptual models, and provide hands-on experience working with them. To accomplish these goals, our speakers will address topics such as the history and motivation for probabilistic models of perception, the relation between sensory uncertainty and probability-theoretic representations of variability, the brain's assumptions about how the world causes sensory measurements, how to investigate the brain's internal knowledge of probability, framing psychophysical tasks as perceptually-guided decisions, and hands-on modeling tutorials presented as Matlab scripts that will be made available for download beforehand so those with laptops can follow along. Each talk will link the conceptual material to the scientific interests of the audience by presenting primary research and suggesting perceptual problems that are ripe for the application of Bayesian methods.

Presentations

Modeling Vision as Bayesian Inference: Is it Worth the Effort?

Alan Yuille; University of Minnesota

Bayesian modeling in the context of robust cue integration

David Knill; University of Rochester

Bayesian models for sequential decisions

Paul Schrater; University of Minnesota

Exploring subjective probability distributions using Bayesian statistics

Tom Griffiths; University of California, Berkeley

Causal inference in multisensory perception

Konrad Koerding; Northwestern University

How to: Applying a Bayesian model to a perceptual question

Peter Battaglia; University of Minnesota

S6: Action for perception: functional significance of eye movements for vision

Friday, May 9, 3:30 - 5:30 pm, Orchid Ballroom 1

Organizers: Anna Montagnini[1] and Miriam Spering[2]; [1]Institut de Neurosciences Cognitives de la Méditerranée; [2]Justus-Liebig University Giessen, Germany

Presenters: Maria Concetta Morrone, Tirin Moore, Michele Rucci, Miriam Spering, Ziad Hafed and Wilson S. Geisler

Symposium Summary

When we view the world around us, our eyes are constantly in motion.

Different types of eye movements are used to bring the image of an object of interest onto the fovea, to keep it stable on this high-resolution area of the retina, or to avoid visual fading. Moment by moment, eye movements change the retinal input to the visual system of primates, thereby determining what we see. This critical role of eye movements is now widely acknowledged, and closely related to a research program termed "Active Vision" (Findlay & Gilchrist, 2003).

While eye movements improve vision, they might also come at a cost.

Voluntary eye movements can impair perception of objects, space and time, and affect attentional processing. When using eye movements as a sensitive tool to infer visual and cognitive processing, these constraints have to be taken into account.

The proposed symposium responds to an increasing interest in vision sciences to use eye movements. The aims of the symposium are (i) to review and discuss findings related to perceptual consequences of eye movements, (ii) to introduce new methodological approaches that take into account these consequences, and (iii) to encourage vision scientists to focus on the dynamic interplay between vision and oculomotor behavior.

The symposium spans a wide area of research on visuomotor interaction, and brings to the table junior and senior researchers from different disciplines, studying different types of eye movements and perceptual behaviors. All speakers are at the forefront of research in vision and brain sciences and have made significant contributions to the understanding of the questions at hand, using a variety of methodological approaches.

Concetta Morrone (Università Vita-Salute, Italy) reviews findings on the perisaccadic compression of space and time, and provides a Bayesian model for these perceptual phenomena. Tirin Moore (Stanford University, USA) discusses the neural mechanisms of perisaccadic changes in visual and attentional processing. Michele Rucci (Boston University, USA) argues for an increase in spatial sensitivity due to involuntary miniature eye movements during fixation, which are optimized for the statistics of natural scenes.

Miriam Spering (University of Giessen, Germany) focuses on the relationship between smooth pursuit eye movements and the ability to perceive and predict visual motion. Ziad Hafed (Salk Institute, USA) discusses the effect of eye movements on object perception, pointing out an intriguing role of oculomotor control for visual optimization. Wilson Geisler (University of Texas, USA) uses ideal-observer analysis to model the selection of fixation locations across a visual scene, demonstrating the high degree of efficiency in human visuomotor strategy.

The topic of this symposium is at the same time of general interest and of specific importance. It should attract at least three groups of VSS attendants – those interested in low-level visual perception, in motor behavior, and those using eye movements as a tool. We expect to attract both students, seeking an introduction to the topic, and faculty, looking for up-to date insights. It will be beneficial for VSS to include a symposium devoted to the dynamic and interactive link between visual perception and oculomotor behavior.

Presentations

Perception of space and time during saccades: a Bayesian explanation for perisaccadic distortions

Maria Concetta Morrone; Università Vita-Salute S Raffaele, Milano, Italy

Neural mechanisms and correlates of perisaccadic changes in visual perception
Tirin Moore; Stanford University School of Medicine

Fixational eye movements, natural image statistics, and fine spatial vision
Michele Rucci; Boston University

Motion perception and prediction during smooth pursuit eye movements
Miriam Spering; Justus-Liebig University Giessen, Germany and New York University

Looking at visual objects
Ziad Hafed; Salk Institute

Mechanisms of fixation selection evaluated using ideal observer analysis
Wilson S. Geisler; University of Texas, Austin

S7: The past, present, and future of the written word

Friday, May 9, 3:30 - 5:30 pm, Royal Palm Ballroom 5

Organizers: Frederic Gosselin[1] and Bosco S. Tjan[2]; [1]Université de Montréal, [2]University of Southern California

Presenters: Susana T.L. Chung, Dennis M. Levi, Denis G. Pelli, Gordon E. Legge, Mark A. Changiz and Marlene Behrmann

Symposium Summary

Gutenberg's invention has democratized the written word: It is estimated that an average English reader will be exposed to over 100 million printed words before the age of 25. The scientific investigation of reading pioneered by Cattell in the 19th century was largely focused on single word recognition through the study of its cognitive, linguistic, and other high-level determinants (e.g., lexical frequency). Accordingly, in most of the influential theories of reading, the front-end visual processing remains unspecified, except with the assumption that it provides the abstract letter identities. This approach to reading greatly underestimates the complexity and the critical role of vision. Text legibility is strongly determined by the ease with which letters can be identified (Pelli et al., 2003), but it appears that standard fonts (e.g., Arial, Times) may be suboptimal as visual stimuli. For instance, the discriminability of a letter from the remainder of the alphabet, as indexed by identification accuracy with brief presentations, is inversely correlated with letter frequency, such that the letters most frequently encountered in texts are among the least discriminable. There is also a significant mismatch between the diagnostic spatial frequency spectra of letters and the human contrast sensitivity function, such that a large proportion of stimulus information is of poor use for the visual system (Chung et al., 2002; Majaj et al., 2002; Poder, 2003; Solomon & Pelli, 1994). Is there room for improvement? Previous attempts to improve reading speed in individuals with low-vision by bandpassing word images in the mid to high spatial frequency range led to equivocal results (Fine & Peli, 1995). However, we have recently witnessed significant advances in our understanding of foveal and peripheral vision and the mechanisms for letter identification and reading. Can this novel knowledge be applied to the development of fonts optimized for normal and impaired visual systems (e.g., developmental, letter-by-letter, or deep dyslexia, macular degeneration, cataract, diabetic retinopathy)? This is the challenge that the organizers of this symposium are submitting to the participants. We hope that this will be the first step toward vision science leading the way to a second Gutenberg-like revolution: Instant speed reading for all!

Presentations

Enhancing letter recognition and word reading performance
Susana T.L. Chung; University of Houston

Letter recognition, crowding and reading in amblyopia
Dennis M. Levi; University of California, Berkeley

Legibility
Denis G. Pelli; New York University

The eyes have it: Sensory factors limit reading speed
Gordon E. Legge; University of Minnesota

The structures of letters and symbols throughout human history are selected to match those found in objects in natural scenes
Mark A. Changizi; Rensselaer Polytechnic Institute

Cognitive and neural mechanisms of face and word processing: Common principles
Marlene Behrmann; Carnegie Mellon University

S8: Surface material perception

Friday, May 9, 3:30 - 5:30 pm, Royal Palm 6-8

Organizer: Roland W Fleming; Max Planck Institute for Biological Cybernetics, Tübingen, Germany

Presenters: Roland W. Fleming, Melvyn A. Goodale, Isamu Motoyoshi, Daniel Kersten, Laurence T. Maloney and Edward H. Adelson

Symposium Summary

When we look at an everyday object we gain information about its location and shape and also about the material it is made of. The apparent color of an orange signals whether it is ripe; its apparent gloss and mesoscale texture inform us whether it is fresh. All of these judgments are visual judgments about the physical chemistry of surfaces, their material properties. In the past few years, researchers have begun to study the visual assessment of surface material properties, notably gloss and mesoscale texture ("roughness"). Their research has been facilitated by advances in computer graphics, statistical methodology, and experimental methods and also by a growing realization that the visual system is best studied using stimuli that approximate the environment we live in. This symposium concerns recent research in material perception presented by six researchers in computer science, neuroscience and visual perception.

The successive mappings from surface property to retinal image to neural state to material judgments are evidently complex. Coming to understand how each step leads to the next is a fascinating series of challenges that crosses disciplines. An initial challenge is to work out how changes in surface material properties are mirrored in changes in retinal information, to identify the cues that could potentially signal a surface material property such as gloss or roughness.

A second challenge is to determine which cues are actually used by the visual system in assessing material properties. Of particular interest are recent claims that very simple image statistics contain considerable information relevant to assessing surface material properties. A third challenge concerns the neural encoding of surface properties and what we can learn from neuroimaging, a fourth, how variations in one surface material property affect perception of a second.

A final – and fundamental -- challenge is to work out how the organism learns to use visual estimates of material properties to guide everyday actions -- to decide which oranges to eat and which to avoid.

The symposium is likely to be of interest to a very wide range or researchers in computer vision, visual neuroscience and visual perception, especially perception of color. lightness and texture.

Presentations

Perception of materials that transmit light
Roland W. Fleming; Max Planck Institute for Biological Cybernetics, Tübingen, Germany

How we see stuff: fMRI and behavioural studies of visual routes to the material properties of objects.
Melvyn A. Goodale; The University of Western Ontario

Histogram skewness and glossiness perception
Isamu Motoyoshi; NTT Communication Science Laboratories

Object lightness and shininess
Daniel Kersten; University of Minnesota

Multiple surface material properties, multiple visual cues
Laurence T. Maloney; New York University

What is material perception good for?
Edward H. Adelson; MIT

Friday Sessions

Friday, May 9, 5:30 - 8:30 pm
Poster Session, Vista Ballroom

Attention: Selection over Time

16.101 **The contingent negative variation (CNV) event-related potential (ERP) predicts the attentional blink** *Kimron Shapiro, Elwyn Martin, Isabel Arend, Stephen Johnston, Christoph Klein*

16.102 **The "working" component of working memory predicts AB magnitude** *Mary MacLean, Kirk Stokes, Carleen Gicante, Karen Arnell*

16.103 **That's My Name, Don't Wear it Out: Attentional Blink and the Cocktail Party Effect** *Gillian Dale, Ryan Young, Karen Arnell*

16.104 **When do additional distractors reduce and increase the attentional blink?** *Jun Kawahara*

16.105 **Shrinking and Shifting: Two alternative task-dependent modes of attentional control** *Lisa N. Jefferies, Vincent Di Lollo*

16.106 **Delay of selective attention during the attentional blink** *Deborah Hanus, Edward Vul, Nancy Kanwisher*

16.107 **Individual Differences in Distractor Priming During the Attentional Blink: Distractor Inhibition Gives Rise to Awareness** *Paul Dux, René Marois*

16.108 **Object processing in the absence of attention** *Irina Harris, Claire Benito, Paul Dux*

16.109 **Noise Overlay on the RSVP stream reduces the AB** *Fook Chua*

16.110 **Inter-trial switches in perceptual load modulate semantic processing during the attentional blink** *Jocelyn Sy, Barry Giesbrecht*

16.111 **Rapid reconfiguration reduces the attentional blink** *James Elliott, Barry Giesbrecht*

16.112 **ERP Evidence for Temporary Loss of Control During the Attentional Blink** *Jason E. Reiss, James E. Hoffman, Frankie D. Heyward, Matthew M. Doran, Steven B. Most*

16.113 **Evidence for rapid extraction of average size in RSVP displays of circles** *Chris Oriet, Jennifer Corbett*

16.114 **Can race enhance perceptual awareness? Evidence from the attentional blink paradigm** *Donna Bridge, HeeYoung Choo, Joan Chiao*

16.115 **Does the prolonged attentional blink to emotional stimuli affect driving performance?** *Lana Trick, Seneca Brandigampola, James Enns*

Motion: Integration, Flow, and Depth

16.116 **Similar Processing for Detection and Position Discrimination of Expanding, Contracting and Rotating Motion Flow Patterns in Random Dot Kinematograms, Shown by Adaptation and TMS** *Benjamin Harvey, Alan Cowey, Oliver Braddick*

16.117 **Coherence dependence of high-density visual evoked potentials to global form and motion displays** *John Wattam-Bell, Deidre Birtles, Wes Li, Pei-Ying Lin, Oliver Braddick, Janette Atkinson*

16.118 **Common first- and second-order motion processing at high temporal frequencies** *Remy Allard, Jocelyn Faubert*

16.119 **The Perceived Motion Direction of Fast-Moving Type-II Plaids** *Danting Liu, George Sperling*

16.120 **Motion integration fields are dynamically elongated in the direction of motion** *Andy Rider, Alan Johnston, Peter McOwan*

16.121 **Spatial scale invariance of the amblyopic global motion deficit** *Craig Aaen-Stockdale, Robert F. Hess*

16.122 **The perception of path curvature: Effects of projected velocity and projected size** *Shaw Gillespie, Myron Braunstein, George Andersen*

16.123 **Motion detection sensitivity enhanced by induced motion** *Hiromasa Takemura, Ikuya Murakami*

16.124 **Motion Grouping/Segmentation Via Velocity Gradients** *Aaron Clarke, Stéphane Rainville*

16.125 **Visual motion interaction between central and peripheral visual fields for the manual following response** *Hiroaki Gomi, Shin'ya Nishida*

16.126 **Stability of SSVEP Responses to Optic Flow** *Rick Gilmore, Stephen Mattes, Adam Christensen*

16.127 **Linear sub-space modeling responses to transparent motions comprised of radial dot flows** *Roger Lew, Brian P. Dyre*

16.128 **Neural circuits underlying the perception of 3D motion** *Bas Rokers, Lawrence Cormack, Alex Huk*

16.129 **Failure of Decomposition of Translation and Expansion/Rotation in Optic-flow Perception** *Kwan J. Lee, Norberto M. Grzywacz*

16.130 **When Are Trajectories for Motion-in-depth Stimuli Perceived Accurately?** *Amanda Alvarez, David Hoffman, Martin Banks*

16.131 **Superior perception of circular/radial than translational motion cannot be explained by generic priors** *Alan Lap-fai Lee, Alan Yuille, Hongjing Lu*

16.132 **Effects of Focal Brain Lesions on Perception of Different Motion Types** *Jutta Billino, Doris Braun, Frank Bremmer, Karl Gegenfurtner*

Object Perception: Neural Mechanisms

16.133 **Visual Denoising of Object Images Along the Ventral Pathway** *Jascha Swisher, Devin Brady, Frank Tong*

16.134 **The release from adaptation in LOC from viewing a sequence of two different objects: An effect of shape or semantics?** *Jiye G. Kim, Mark D. Lescroart, Kenneth J. Hayworth, Irving Biederman*

16.135 **Explicit relation coding in the Lateral Occipital Complex** *Kenneth Hayworth, Mark Lescroart, Irving Biederman*

16.136 **Can value learning modulate low-level visual object recognition? An ERP study** *Jennifer L. O'Brien, Helena J.V. Rutherford, Jane E. Raymond*

16.137 **Invariant decoding of object categories from V1 and LOC across different colors, sizes and speeds** *Yi Chen, John-Dylan Haynes*

16.138 **Location-Invariant Object Information in Foveal Retinotopic Cortex** *Mark Williams, Chris Baker, Hans Op de Beeck, Sabin Dang, Christina Triantafyllou, Nancy Kanwisher*

16.139 **Dynamic objects are more than the sum of their views: Behavioural and neural signatures of depth rotation in object recognition** *Quoc C Vuong, Johannes Schultz*

16.140 **Integral versus Separable Perceptual Dimensional Pairs are Reflected in Conjoint versus Independent Neural Populations** *Daniel Drucker, Geoffrey Aguirre*

16.141 **Dissociate binding processing and object representation – a study combining EEG and fMRI** *Xiang Wu, Daren Zhang*

16.142 **Inter-area correlations in the human ventral visual pathway reflect feature integration** *Jeremy Freeman, Tobias H. Donner, David J. Heeger*

16.143 **Implicit coding of location, scale and configural information in feedforward hierarchical models of the visual cortex** *Cheston Tan, Thomas Serre, Gabriel Kreiman, Tomaso Poggio*

16.144 **Does perceived shape underlie the category selectivity in human occipitotemporal cortex for faces, body parts, and buildings?** *Hans Op de Beeck, Marijke Brants, Annelies Baeck, Johan Wagemans*

16.145 **Reliability of object- and face-selective activations measured with high-resolution fMRI** *David Remus, Nicolas Davidenko, Yanle Hu, Gary Glover, Kalanit Grill-Spector*

16.146 **BOLD signal response functions for object and face processing in noise** *Pinglei Bao, Xiaomin Yue, Bosco S. Tjan*

Perception and Action: Hand Movements

16.147 **Integration of object-centered and viewer-centered visual information in an open-loop pointing task** *Patrick Byrne, Smiley Pallan, XiaoGang Yan, Doug Crawford*

16.148 **Visual feedback control of pointing movements in depth** *Bo Hu, David Knill*

16.149 **Effects of Experience and Amount of Visual Feedback when Pointing to Visible and Remembered Targets** *Karen Lau, Eric Roy, Genevieve Desmarais*

16.150 **Non-lateralized impairments in anti- but not pro-pointing in patients with hemispatial neglect** *Stéphanie Rossit, Keith Muir, Ian Reeves, George Duncan, Katrina Livingstone, Hazel Jackson, Pauline Castle, Monika Harvey*

16.151 **Attention for action? Examining the link between attention and visuomotor control deficits in a patient with optic ataxia** *Christopher Striemer, Annabelle Blangero, Yves Rossetti, Laure Pisella, James Danckert*

16.152 **Improved blindsight near the hand is associated with increased fMRI activation in the superior parietal-occipital cortex** *Liana Brown, Jody Culham, Greg Kroliczak, Melvyn Goodale*

16.153 **Neural model for the visual recognition of hand actions** *Martin Giese, Falk Fleischer, Antonino Casile*

16.154 **Intermittent feedback model of goal directed forearm movement** *Oh-Sang Kwon, Jeffrey Shelton*

16.155 **The use of visual information during a visual saccade for the control of a goal-directed upper limb movement** *Luc Tremblay, Marlene Luis*

16.156 **Movement intention versus motor preparation in the orientation of visuo-spatial attention: The case of tool use** *Thérèse Collins, Brigitte Röder, Tobias Schicke*

16.157 **Motion Interference Effects while Performing and Viewing Actions with Hand-Held Objects** *Stephen Killingsworth, Daniel Levin*

16.158 **It's all a matter of mass: Both the eye and hand know it** *Gordon Binsted, Kyle Brownell, Matthew Heath*

16.159 **Why does intermanual transfer occur?** *Amaris Siegel, Ian Budge, Manvir Gill, Denise Henriques*

16.160 **Bimanual coupling in left and right space: which hand is yoked to which?** *Gavin Buckingham, Gordon Binsted, David P. Carey*

16.161 **Hand-eye correlation: Sensorimotor learning of movement/color pairs** *David Richters, Scott Gabree, Rhea Eskew*

16.162 **The impact of expertise on the processing of 2D and 3D images: the case of minimal invasive surgery** *Adelaide Blavier, Anne-Sophie Nyssen*

Saturday Sessions

Saturday, May 10, 8:30 - 10:00 am
Talk Session, Vista Ballroom

Central Pathways

Moderator: Ruxandra Sireteanu

8:30 am

21.11 **The visual field maps in the human MT+ complex** *Kaoru Amano, Brian Wandell, Serge Dumoulin*

8:45 am

21.12 **Functional brain imaging of the 'Rotating Snakes' illusion** *Ichiro Kuriki, Hiroshi Ashida, Ikuya Murakami, Akiyoshi Kitaoka*

9:00 am

21.13 **Human brain regions that are responsive to optic flow only when the flow is consistent with egomotion** *Andrew T Smith, Matthew B Wall*

9:15 am

21.14 **Types and Tokens in the Ventral Visual Pathway: The neural representation of multiple visual objects** *Won Mok Shim, Yuhong V Jiang, Nancy Kanwisher*

9:30 am

21.15 **Collicular vision guides non-conscious behavior** *Marco Tamietto, Franco Cauda, Luca Latini Corazzini, Silvia Savazzi, Carlo Marzi, Rainer Goebel, Lawrence Weiskrantz, Beatrice de Gelder*

9:45 am

21.16 **Graphical illustration and functional neuroimaging of visual hallucinations during prolonged blindfolding: A comparison to visual imagery** *Ruxandra Sireteanu, Viola Oertel, Harald Mohr, Corinna Haenschel, David Linden, Konrad Maurer, Wolf Singer, Marietta Schwarz*

Saturday, May 10, 8:30 - 10:00 am
Talk Session, Royal Palm Ballroom 4-5

Perceptual Organization 1

Moderator: Pascal Mamassian

8:30 am

21.21 **Patch Pair Statistics for Leaf Segmentation** *Almon Ing, Wilson Geisler*

8:45 am

21.22 **Binding the pieces: Efficacies of grouping cues** *Yuri Ostrovsky, Anya Leonova, Pawan Sinha*

9:00 am

21.23 **Perceptual organization across spatial scales in natural images: Seeing more high spatial frequency than meet the eyes** *Aude Oliva, Timothy F. Brady*

9:15 am

21.24 **Testing filter-overlap models of contour integration** *Keith May, Robert Hess*

9:30 am

21.25 **Independent Measures of Adaptation and Aftereffect** *Kai-Markus Mueller, David H. Do, David A. Leopold*

9:45 am

21.26 **The visual system uses different estimators for different distributions in a novel task even without feedback or the possibility of learning** *Laurence T. Maloney, Pascal Mamassian*

Saturday, May 10, 10:30 am - 12:15 pm
Talk Session, Vista Ballroom

3D Perception and Image Statistics

Moderator: David Knill

10:30 am

22.11 **The subjective reliability of a newly recruited visual cue is similar whether or not a long-trusted cue is also present in the stimulus** *Benjamin Backus*

10:45 am

22.12 **Image statistics for 3D shape estimation** *Roland Fleming, Yuanzhen Li, Edward Adelson*

11:00 am

22.13 **Prior expectations in slant perception: Has the visual system internalized natural scene geometry?** *Ahna Girshick, Johannes Burge, Gennady Erlikhman, Martin Banks*

11:15 am

22.14 **Learning shape-specific Bayesian priors for depth perception** *David Knill*

11:30 am

22.15 **Nonlinear Biases in the Perception of 3D Slant from Texture** *James Todd, James Christensen, Kevin Guckes*

11:45 am

22.16 **Blur and accommodation are metric depth cues** *Johannes Burge, Robert Held, Martin S. Banks*

12:00 pm

22.17 **Superior Occipital Regions Track Perceived Viewing Distance in Two Dimensional Images** *Marian Berryhill, Geoffrey Aguirre, Ingrid Olson*

Saturday, May 10, 10:30 am - 12:15 pm
Talk Session, Royal Palm Ballroom 4-5

Object: Neural Mechanisms

Moderator: Frans Verstraten

10:30 am

22.21 **Retinal Position and Object Category Effects in Human Lateral Occipital Cortex** *Rory Sayres, Kalanit Grill-Spector*

10:45 am

22.22 **How Translation Invariant are Object Representations in the Human Posterior Fusiform Gyrus?** *Mark D. Lescroart, Kenneth J. Hayworth, Irving Biederman*

11:00 am

22.23 **Orthogonal representations of object category and location in object selective cortex** *Thomas A. Carlson, Hinze Hogendoorn, Hubert Fonteijn, Frans A. J. Verstraten*

11:15 am

22.24 **The 'Parahippocampal Place Area' Responds Selectively to High Spatial Frequencies in Humans and Monkeys** *Reza Rajimehr, Kathryn Devaney, Jeremy Young, Gheorghe Postelnicu, Roger Tootell*

11:30 am

22.25 **Imaging prior information in the visual system** *Scott Gorlin, Jitendra Sharma, Hiroki Sugihara, Mriganka Sur, Pawan Sinha*

11:45 am

22.26 **Neural correlates of music reading expertise** *Yetta Kwailing Wong, Isabel Gauthier*

12:00 pm

22.27 **Circular inference in neuroscience: The dangers of double dipping** *Nikolaus Kriegeskorte, William K. Simmons, Pat S. Bellgowan, Chris I. Baker*

Saturday, May 10, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 1-3

Binocular Mechanisms 1

23.301 **Depth, but not Surface Orientation, from Binocular Disparities** *Pascal Mamassian*

23.302 **The orientation disparity field accounts for a slant by tilt anisotropy** *Carlo Fantoni, Walter Gerbino*

23.303 **Orientation difference, spatial separation, intervening stimuli: What degrades stereoacuity and what doesn't** *Bart Farell, Fernandez Julian*

23.304 **Computation of the Geometric Inputs to Depth Perception** *Keith Stroyan*

23.305 **Individual differences in depth perception: are biases correlated with eye position?** *Julie Harris, Adrien Chopin, Katherina Zeiner*

23.306 **Propagation of depth from Temporal Inter-ocular Unmatched Features and Binocular Information** *Rui Ni, George Andersen*

23.307 **Binocular disparity as a cue to perceive direction** *Masahiro Ishii, Kazuya Yamashita, Zheng Tang*

23.308 **Stereo matching problem is resolved at population level in the early stage of extrastriate visual cortex** *Gang Chen, Haidong Lu, Hisashi Tanigawa, Anna Roe*

23.309 **Interocular transfer of fMRI adaptation in stereodeficient observers** *Alina Jurcoane, Donka Mitsieva, Bhaskar Choubey, Lars Muckli, Ruxandra Sireteanu*

23.310 **Decoding depth order and three-dimensional shape perception from human cortical activity of dorsal and ventral areas** *Hiroaki Shigemasu, Yoichi Miyawaki, Yukiyasu Kamitani, Michiteru Kitazaki*

23.311 **The development of coarse stereopsis in school aged children** *Deborah Giaschi, Kevin MacKenzie, Catherine Boden, Aliya Solski, Laurie Wilcox*

Eye Movements, Search and Attention

23.312 **Saccadic inhibition during information accrual in a visual search task** *Ranga Atapattu, Frank Durgin*

23.313 **The spatial extent of attention for saccades: attentional facilitation compared to inhibition of return in humans and monkeys** *Aarlenne Khan, Naomi Takahashi, Stephen Heinen, Robert McPeek*

23.314 **Head-mounted eye-tracking with children: Visual guidance of motor action** *Karen E Adolph, John M Franchak, Daryaneh Badaly, Michael T Smith, Jason S Babcock*

23.315 **Predicting Eye Movement Trajectories in a Multiple Object Tracking (MOT) Task with Free Viewing** *Arash Fazl, Ennio Mingolla*

23.316 **How inactivation of the superior colliculus can cause a constant eye position offset during object tracking** *Ziad Hafed, Richard Krauzlis*

23.317 **More than meets the eye: Investigating expert and novice differences in action video games** *Carl F. Smith, Yi-Fang D. Tsai, Jason H. Wong, Daniel T. Brooks, Matthew S. Peterson*

23.318 **Optimal continuous-time control of eye movements during visual search** *Jiri Najemnik, Wilson Geisler*

23.319 **Scan pattern adaptations to repeated visual search** *Christopher Myers, Wayne Gray*

23.320 **Memory for objects and locations in visual search** *Neil Mennie, Geoffrey Underwood*

23.321 **Presaccadic deployment of attention: what is the trigger?** *Anna Montagnini, Eric Castet*

23.322 **Low-level Fixation Search in Natural Scenes by Optimal Extraction of Texture-Contrast Information** *Raghu Raj, Alan Bovik, Lawrence Cormack*

23.323 **Pro-active Gaze Control in Squash** *Travis McKinney, Kelly Chajka, Mary Hayhoe*

23.324 **Low and high level changes in eye gaze behavior as a result of expertise** *Dean Wyatte, Thomas Busey*

23.325 **Avoiding Collisions in Real and Virtual Environments** *Jelena Jovancevic, Brian Sullivan, Mary Hayhoe*

23.326 **Interesting Locations in Natural Scenes Draw Eye Movements** *Christopher Masciocchi, Stefan Mihalas, Derrick Parkhurst, Ernst Niebur*

23.327 **Do the eyes count? The role of eye movements in visual enumeration** *Gordon Logan, Jane Zbrodoff, Xingshan Li*

23.328 **Biological Motion in Natural Scenes Captures Eye Movements** *Katja M Mayer, Quoc C Vuong*

23.329 **Looking as if you know: Eye guidance preceding object recognition** *Linus Holm, Johan Eriksson, Linus Andersson*

23.330 **Examining scanpaths and inhibition of return as a function of task instruction during scene viewing** *Michael Dodd, Stefan Van Der Stigchel, Andrew Hollingworth, Alan Kingstone*

23.331 **Stimulus contrast and the remote distractor effect: differential effects for foveal and peripheral distractors** *Sabine Born, Dirk Kerzel*

23.332 **Oculomotor competition when working memory is occupied** *Stefan Van der Stigchel*

Motion: Higher Mechanisms and Illusions

23.333 **Feature-tracking Mechanism Dominates Motion Perception as the Retinal Illuminance Decreases** *Tatsuto Takeuchi, Karen K. De Valois*

23.334 **Visual competition between ambiguous and unambiguous motion signals in grating patterns** *Enrico Giora, Simone Gori*

23.335 **Two streams make a bounce: Induced motion reversal by crossing the trajectories of two motion sequences** *Yousuke Kawachi, Philip Grove, Kenzo Sakurai, Jiro Gyoba*

23.336 **Induced motion with chromatic stimuli** *Akiyuki Inokuma, Takao Sato*

23.337 **Vection induction is determined by the world coordinate** *Takeharu Seno, Takao Sato*

23.338 **The role of hMST in the perception of object movement during self-movement** *Simon Rushton, Petroc Sumner, Krish Singh*

23.339 **The internal model of visual gravity contributes to interception of real and apparent motion as revealed by fMRI** *Vincenzo Maffei, Emiliano Macaluso, Guy Orban, Francesco Lacquaniti*

23.340 **Neural substrate of the perception of phi (pure) movement** *Zygmunt Pizlo, Sungeun Kim, Thomas Talavage, Filip Pizlo, Robert Steinman*

23.341 **Paradoxical motion perception observed through contrast-alternating multiple-slit-viewing** *Ryusuke Hayashi, Kenji Kawano*

23.342 **Stimulus factors that influence the perceived direction of Tilt-induced Motion** *Nora Paymer, Gideon Caplovitz, Peter Tse*

23.343 **Why does Rotating Tilted Lines Illusion rotate?** *Arash Yazdanbakhsh, Simone Gori*

23.344 **Can depth information affect the Enigma Illusion?** *Simone Gori, Alessandra Galmonte, Tiziano Agostini*

23.345 **The effect of metacontrast masking on the Fröhlich Effect** *Michael Zenz, Rick Cai*

Saturday, May 10, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 6-8

Attention: Selection and Modulation 1

23.401 **A Taxonomy of Visual Attention** *William Prinzmetal, Ruby Ha*

23.402 **A visual redundant-signal effect strongly depends on attention even for probability summation** *Emmanuel Guzman, German Palafox, Marcia Grabowecky, Satoru Suzuki*

23.403 **Facilitatory effects of expectation on object discrimination** *Amrita Puri, David Whitney, Charan Ranganath*

23.404 **Attentional Control Settings Affect Attention but Not Perception: A Study of Gaze Cues and Pupilometry** *Naseem Al-Aidroos, Katty Ho, Jay Pratt*

23.405 **Partially valid cueing and spatial filtering reveal different kinds of selection** *Serap Yigit, John Palmer, Cathleen Moore*

23.406 **Cue salience modulates the effects of exogenous attention on apparent contrast** *Yunsoo Park, Stuart Fuller, Marisa Carrasco*

23.407 **Bilateral Superiority in Detecting Gabor Targets Among Gabor Distracters** *Nestor Matthews*

23.408 **Expansion and Contraction of the Attentional Focus Is Influenced by Top-Down Factors** *Shahab Ghorashi, Lisa N. Jefferies, Vincent Di Lollo*

23.409 **Perceptual consequences of visual performance fields: The case of the line motion illusion** *Stuart Fuller, Marisa Carrasco*

23.410 **Attention to hierarchical level influences spatial frequency processing** *Anastasia Flevaris, Shlomo Bentin, Lynn Robertson*

23.411 **Endogenous, sustained attention alters contrast appearance** *Jared Abrams, Taosheng Liu, Marisa Carrasco*

23.412 **Spatial attention to an invisible adaptor can increase the magnitude of adaptation** *Kilho Shin, Sang Chul Chong*

23.413 **The behavioural temporal dynamics of attention with multiple uncued locations** *Steven Shimozaki*

23.414 **The creaky attentional gate: temporal changes in the spatial extent of attention in elderly and young observers** *Alexa Roggeveen, Lisa Jefferies, Allison Sekuler, Patrick Bennett, Vincent DiLollo*

Faces: Inversion and Viewpoint Effects

23.415 **The Inversion effect of Chinese Character** *Yi-Min Tien, Horng-Yih Lee, Jing-Yi Tsai, Li-Chuan Hsu*

23.416 **The influence of eye and mouth position on judgments of face orientation** *Masayoshi Nagai, Koji Kazai, Patrick Bennett, Haruhiro Katayose, Akihiro Yagi, M. D. Rutherford, Allison Sekuler*

23.417 **Face adaptation aftereffects reveal norm-based coding for upright and inverted face shape** *Tirta Susilo, Elinor McKone, Mark Edwards*

23.418 **Face discrimination at various phase orientations** *Valerie Goffaux*

23.419 **Upright face advantage in visual information processing under interocular suppression only available for the low spatial frequency pathway** *Robert Shannon, Yi Jiang, Sheng He*

23.420 **The Face Inversion Effect Is Nothing "Spatial"** *Verena Willenbockel, Daniel Fiset, Alan Chauvin, Caroline Blais, Martin Arguin, Jim Tanaka, Daniel Bub, Frédéric Gosselin*

23.421 **Face Shape Discrimination is Insensitive to Inversion** *Pamela Pallett, Donald I. A. MacLeod*

23.422 **Inversion disrupts both configural and featural face processing equally** *Kang Lee, Deborah Weiss, Frank Haist, Joan Stiles*

23.423 **Processing upright and inverted faces in acquired prosopagnosic patients with no object recognition deficits** *Thomas Busigny, Sven Joubert, Olivier Felician, Bruno Rossion*

23.424 **Nonlinear relationship between holistic processing of individual faces and picture-plane rotation: evidence from the face composite illusion** *Bruno Rossion, Adriano Boremanse*

23.425 **Independent Discrimination of Left/Right and Up/Down Head Orientations** *Hugh R. Wilson, Marwan Daar, Shirin Mohsenzadeh, Frances Wilkinson*

23.426 **Representations of facial identity over changes in viewpoint** *Vaidehi Natu, Fang Jiang, Abhijit Narvekar, Shaiyan Keshvari, Alice O'Toole*

23.427 **The effect of training on the recognition of faces across changes in viewpoint** *Mayu Nishimura, Samidha Joglekar, Daphne Maurer*

23.428 **The First Spike Counts: A Model for STDP Learning Pose Specific Representations for Estimating View Direction** *Ulrich Weidenbacher, Heiko Neumann*

23.429 **View-dependent Adaptation to Familiar snd Unfamiliar Faces in the Human Brain** *Jodie Davies-Thompson, Spyroula Spyrou, Timothy J. Andrews*

23.430 **A single holistic representation of spacing and feature shape in faces** *Elinor McKone, Galit Yovel*

23.431 **The role of external head contours in face processing in the human occipitotemporal cortex** *Chien-Chung Chen, Rung-Yu Tseng*

23.432 **The Fusiform Face Area spontaneously codes spatial relations in faces** *Gillian Rhodes, Patricia Michie, Matthew Hughes, Graham Byatt*

Multisensory Processing: Low Level

23.433 **Position discrimination of auditory stimuli in early visual cortex** *Santani Teng, David Whitney*

23.434 **The locus of auditory-visual integration in the human brain** *Yasuto Tanaka, Takeshi Nogai, Shinji Munetsuna*

23.435 **Auditory-visual interactions in a patient with bilateral occipital lobe lesions** *Stephen R. Arnott, Jonathan S. Cant, Gordon N. Dutton, Kevin G. Munhall, Melvyn A. Goodale*

23.436 **Cross-modal selective attention effects on steady-state visual evoked potentials (SSVEPs)** *Parkson Leung, Yee Joon Kim, Marcia Grabowecky, Ken A. Paller, Satoru Suzuki*

23.437 **Audiovisual multisensory facilitation: A fresh look at neural coactivation and inverse effectiveness** *Lynnette Leone, Mark McCourt*

23.438 **Learning associations between simple visual and auditory features** *David Wozny, Aaron Seitz, Ladan Shams*

23.439 **Haptic movements enhance visual motion aftereffect** *Kazumichi Matsumiya, Satoshi Shioiri*

23.440 **Visual, tactile and visuo-tactile motion discrimination** *Monica Gori, Giulio Sandini, David C. Burr*

23.441 **A sound can change four-dot masking** *Jean Vroomen, Mirjam Keetels*

23.442 **The Gestaltist's error revisited with sound** *Su-Ling Yeh, Chien-Hui Chiu, Chuan-Heng Hsiao*

23.443 **Visual cue influence on three-dimensional haptic angle discrimination** *Kazuhiko Yokosawa, Ataru Era*

Saturday, May 10, 8:30 am - 12:30 pm Poster Session, Orchid Ballroom

Faces: Learning and Expertise

23.501 **A noise x inversion paradigm reveals the nature of fingerprint expertise for latent print examiners in EEG and fMRI** *Bethany Schneider, Karin Harman-James, Dean Wyatte, Thomas Busey*

23.502 **Expertise and the width of the visual filter in fingerprint examiners** *Tom Busey, Bethany Schneider, Dean Wyatte*

23.503 **Are all types of expertise created equal? Effects of expertise on categorization and spatial frequency usage** *Assaf Harel, Shlomo Bentin*

23.504 **Can expertise explain why face perception is sensitive to spatial frequency content?** *N. Rankin Williams, Isabel Gauthier*

23.505 **Prolonged visual experience in adulthood modulates perceptual face processes** *Adelaide de Heering, Bruno Rossion*

23.506 **Transferring localized facial learning across all of face space** *Robert Luedeman, Ken Nakayama*

23.507 **A test to explore the learning of multiple novel faces** *Garga Chatterjee, Robert Luedeman, Ken Nakayama*

23.508 **Learning Faces: plasticity and the rehabilitation of congenital prosopagnosia** *Joseph DeGutis, Lynn Robertson, Ken Nakayama, Regina McGlinchey, William Milberg*

23.509 **Predicting perceptual expertise from semantic knowledge : an indexed car test for prosopagnosic patients** *Hashim Hanif, Rana Khalil, George Malcolm, Jason Barton*

Faces: Lifespan Development

23.510 **Perception of mother's face using near-infrared spectroscopy** *Emi Nakato, Yumiko Otsuka, Masami Yamaguchi, Ryusuke Kakigi*

23.511 **Aftereffects reveal enhanced face-coding plasticity in young children** *Linda Jeffery, Gillian Rhodes*

23.512 **The effects of losing an eye early in life on face and emotional expression processing** *Krista Kelly, Jennifer Steeves*

23.513 **A feature story: Similarities among adults, 10-year-olds and cataract-reversal patients in face discrimination** *Catherine Mondloch, Rachel Robbins, Daphne Maurer*

23.514 **Face feature processing in children: What develops and what does not?** *Gizelle Anzures, Liezhong Ge, Wang Zhe, David Kelly, Olivier Pascalis, Paul Quinn, Alan Slater, Kang Lee*

23.515 **Age-related differences in processing capacity for faces** *Rebecca Von Der Heide, Michael Wenger, Rick Gilmore, Jennifer Howarth, Brianna Sullivan, Jennifer Bittner*

23.516 **Childhood improvements in face performance result from general cognitive development not changes in face perception: Evidence from faces versus objects, inversion and implicit memory** *Kate Crookes, Elinor McKone*

23.517 **Face Inversion Effects in Infants are Driven More by High, Than Low, Spatial Frequencies** *Dobkins Karen, Sampath Vanitha*

23.518 **Children's Sensitivity to Configural Cues in Faces Undergoing Rotational Motion** *Gina Shroff, Borah Kim, Danielle Hefets, Peter Gerhardstein*

23.519 **Holistic Face Processing in Infants using Mooney Faces** *Faraz Farzin, Susan Rivera, David Whitney*

23.520 **Age-related changes in face processing** *Janice Murray, Ted Ruffman, Jamin Halberstadt*

Visual Working Memory 1

23.521 **Interactions between visual short term memory and visuospatial attention** *Mark A Halko, John Lymberis, David C Somers*

23.522 **The indirect role of saliency in selection for short-term visual memory** *Alexander Huth, Claudia Wilimzig, Leif Zinn, Christof Koch*

23.523 **Compression in Visual Short-term Memory: Using Statistical Regularities to Form More Efficient Memory Representations** *Timothy F. Brady, Talia Konkle, George A. Alvarez, Aude Oliva*

23.524 **Metric-Dependent Repulsion Between Colors in Visual Working Memory** *Jeffrey Johnson, John Spencer*

23.525 **Directed Forgetting versus Directed Remembering in Visual Working Memory** *Melonie Williams, Geoffrey F. Woodman*

23.526 **Heterogeneous object arrays increase working memory capacity in 7-month old infants** *Mariko Yamaguchi, Arin S. Tuerk, Lisa Feigenson*

23.527 **Visual Short Term Memory for Location: Does Objecthood Matter?** *Thomas Sanocki, Noah Sulman*

23.528 **Strategic Control of Visual Short-term Memory during Scene Viewing** *Ashleigh M. Richard, Andrew Hollingworth*

23.529 **Common capacity limit for visual perception and working memory** *Hiroyuki Tsubomi, Hirohito Kondo, Katsumi Watanabe*

23.530 **No Iconic Memory Decay nor Visual Short-Term Memory Decay for Grating Contrast** *Ling Lin, George Sperling*

23.531 **Selective Effects of Emotion on Visual Short-Term Memory Consolidation** *Steven B. Most, Lingling Wang, Dustin Engelhardt, Kim M. Curby*

23.532 **Updating objects in visual short-term memory** *Philip Ko, Adriane Seiffert*

23.533 **Implicit Knowledge Biases Encoding into Visual Working Memory** *Akina Umemoto, Miranda Scolari, Edward Vogel, Edward Awh*

23.534 **Sudden Death For Overtime Memories** *Weiwei Zhang, Steven Luck*

23.535 **The Capacity for Spatial Updating in Visual Short-term Memory** *Ian P. Rasmussen, Andrew Hollingworth*

23.536 **Activation in V4 predicts fragile or durable storage in visual working memory** *Ilja G. Sligte, H. Steven Scholte, Victor A.F. Lamme*

23.537 **Linking Implicit Chunk Learning snd The Capacity of Working Memory** *Jozsef Fiser, Gergo Orban, Mate Lengyel*

Saturday, May 10, 2:30 - 4:00 pm Talk Session, Vista Ballroom

Eye Movements and Perception

Moderator: Christopher Pack

2:30 pm

24.11 **Microsaccades counteract perceptual filling-in** *Susana Martinez-Conde, Xoana Troncoso, Stephen Macknik*

2:45 pm

24.12 **Saccade adaptation in monkeys is object-specific** *Matthew Phillips, Sara Steenrod, Michael Goldberg*

3:00 pm

24.13 **Fixation locations during three-dimensional object recognition are predicted by image segmentation points at concave surface intersections** *Charles Leek, Stephen Johnston*

3:15 pm

24.14 **Perceptual compression during head-free gaze shifts: visual and extraretinal contributions** *Alby Richard, Jan Churan, Daniel Guitton, Christopher Pack*

3:30 pm

24.15 **Improved visual sensitivity during smooth pursuit eye movements** *Alexander C. Schütz, Doris I. Braun, Dirk Kerzel, Karl R. Gegenfurtner*

3:45 pm

24.16 **Eye movements for shape and material perception** *Lavanya Sharan, Ruth Rosenholtz, Edward H. Adelson*

Saturday, May 10, 2:30 - 4:00 pm Talk Session, Royal Palm Ballroom 4-5

Multiple Object Tracking 1

Moderator: Yuhong Jiang

2:30 pm

24.21 **A Neurophysiological Model of Multiple Object Tracking Derived From fMRI** *Piers Howe, Margaret Livingstone, Istvan Morocz, Todd Horowitz, Jeremy Wolfe*

2:45 pm

24.22 **Attentional capacity is limited by the functional architecture of visual cortex: competition for representation impedes attention to multiple items** *Paige Scalf, Diane Beck*

3:00 pm

24.23 **Probing the Allocation of Attention during Multiple Object Tracking with ERPs** *Andrew McCollough, Trafton Drew, Todd Horowitz, Edward Vogel*

3:15 pm

24.24 **How does attention operate during multiple object tracking?: Evidence from the 'slot-machine' task for parallel access to target features** *Jonathan I. Flombaum, Brian J. Scholl*

3:30 pm

24.25 **Object-based biased competition during covert spatial orienting** *Ed Awh, Miranda Scolari, Jun Ishikawa*

3:45 pm

24.26 **Visual learning in multiple object tracking** *Yuhong V. Jiang, Gustavo A. Vázquez, Tal Makovski*

Saturday, May 10, 4:30 - 6:15 pm Talk Session, Vista Ballroom

Cortical Processing

Moderator: Anna Roe

4:30 pm

25.11 **The role of cortico-cortical interactions during motion integration: a voltage-sensitive dye imaging study in V1 and V2 of the awake monkey** *Frederic Chavane, Alexandre Reynaud, Guillaume Masson*

4:45 pm

25.12 **Functional subdivisions in macaque V4 revealed by optical imaging in the behaving Macaque monkey** *Hisashi Tanigawa, Haidong Lu, Gang Chen, Anna Wang Roe*

5:00 pm

25.13 **Processing of Orientation Discontinuities in Space and Time in V1 and V2** *Anita M. Schmid, Ferenc Mechler, Ifije Ohiorhenuan, Keith P. Purpura, Jonathan D. Victor*

5:15 pm

25.14 **Spatial and Temporal Limits of Pattern Motion Analysis by MT Neurons** *Romesh D. Kumbhani, Yasmine El-Shamayleh, J. Anthony Movshon*

5:30 pm

25.15 **Representation of stimulus speed in prefrontal cortex during speed discrimination task** *Cory Hussar, Leo Lui, Tatiana Pasternak*

5:45 pm

25.16 **The Role of the Frontal Eye Fields in Velocity Compensation During Saccades to Moving Targets** *Carlos Cassanello, Abhay Nihalani, Vincent Ferrera*

6:00 pm

25.17 **Functional differentiation of macaque visual temporal cortical neurons using a parameterized action space** *Joris Vangeneugden, Frank Pollick, Rufin Vogels*

Saturday, May 10, 4:30 - 6:15 pm Talk Session, Royal Palm Ballroom 4-5

Attention: Divided Attention

Moderator: Alejandro Lleras

4:30 pm

25.21 **Quantifying the effects of sleepiness on sustained visual attention** *Todd Horowitz, Jeremy Wolfe, Daniel Cohen, Charles Czeisler, Elizabeth Klerman*

4:45 pm

25.22 **An interface between language and vision: quantifier words and set-based processing** *Justin Halberda, Tim Hunter, Paul Pietroski, Jeffrey Lidz*

5:00 pm

25.23 **Neural correlates of inhibition to individual members of complex visual categories that have been recently rejected as distracting** *Alejandro Lleras, JeeWon Ahn, Brian Levinthal, Diane Beck*

5:15 pm

25.24 **Unconsciously triggered inhibitory control is associated with frontal brain potentials** *Simon van Gaal, K. Richard Ridderinkhof, Johannes J. Fahrenfort, Victor A. F. Lamme*

5:30 pm

25.25 **Motion induced blindness: The more you attend the less you see** *Olivia Carter, Robert Luedeman, Stephen Mitroff, Ken Nakayama*

5:45 pm

25.26 **Adaptation-induced blindness** *Isamu Motoyoshi, Sayuri Hayakawa*

6:00 pm

25.27 **Attentional learning: The role of distractor expectancy** *Todd Kelley, Nilli Lavie*

Saturday, May 10, 2:30 - 6:30 pm Poster Session, Royal Palm Ballroom 1-3

Binocular Rivalry and Integration 1

26.301 **The stabilization of a binocular percept during intermittent presentation** *Para Kang, Steven Shevell*

26.302 **The importance of static phase-aligned, high spatial frequency components for continuous flash suppression** *Goro Maehara, Pi-Chun Huang, Robert Hess*

26.303 **Incompatible local features are unnecessary for binocular suppression** *Yong Su, Teng Leng Ooi, Zijiang He*

26.304 **Faces Are Privileged Stimuli: The Effect of Stimulus Characteristics on Continuous Flash Suppression** *Eric A. Reavis, Seyed Reza Afraz, Ken Nakayama*

26.305 **Voluntary attention can modulate eye-specific neural signals prior to the site of interocular competition** *Peng Zhang, Sheng He*

26.306 **Misbinding of color to form in afterimages follows from a persisting binocular neural representation** *Rebecca St.Clair, Sang Wook Hong, Steven Shevell*

26.307 **Suppression during binocular rivalry broadens orientation tuning** *Sam Ling, Randolph Blake*

26.308 **Binocular rivalry between fast 'streaky' motions deeply suppresses static orientation probes: Evidence for motion streaks** *David Alais, Deborah Apthorp, Peter Wenderoth*

26.309 **How emotional arousal and affect influence access to visual awareness** *Bruno Breitmeyer, Thuan Pham, Bhavin Sheth*

26.310 **Pupillary response to grating patterns during permanent suppression** *Eiji Kimura, Satoru Abe, Ken Goryo*

26.311 **Integration of color and pattern investigated with visibility modulation of chromatic gratings** *Satoru Abe, Eiji Kimura, Ken Goryo*

26.312 **Bi-stable perception and neural competition at equidominance and away from it** *Yulia Lerner, Miki Fukui, Nava Rubin*

26.313 **Rotating walker: An ambiguous biological stimulus reveals biases in human vision** *Stuart Jackson, Nuala Brady, Fred Cummins*

26.314 **Pupil dynamics during bistable form/motion binding** *Cédric Lamirel, Jean-Michel Hupé, Jean Lorenceau*

26.315 **The role of frontal areas in alternations during perceptual bistability** *Tomas Knapen, Joel Pearson, Jan Brascamp, Raymond van Ee, Randolph Blake*

26.316 **Can noises defeat will power in Necker cube reversals? Equating top-down influence with bottom-up bias with a noise paradigm** *Sarina Hui-Lin Chien, Jen-Chao Chen, Chien-Chung Chen*

Faces: Other-race Effects

26.317 **Face recognition algorithms and the "other-race" effect** *Alice O'Toole, P. Jonathon Phillips, Abhijit Narvekar, Fang Jiang, Julianne Ayyad*

26.318 **Two faces of the other-race effect: Recognition and categorization of Caucasians and Chinese Faces** *Hongchuan Zhang, Liezhong Ge, Zhe Wang, David Kelly, Paul Quinn, Alan Slater, Olivier Pascalis, Kang Lee*

26.319 **Potent features for the categorization of Caucasian, African American, and Asian faces in Caucasian observers** *Daniel Fiset, Caroline Blais, Frédéric Gosselin, Daniel Bub, Jim Tanaka*

26.320 **Seeing beyond faces: the social significance of being an other-race expert** *Sophie Lebrecht, Lara Pierce, James Tanaka, Michael, J. Tarr*

26.321 **Other-Race Faces: Limitations of Expert Face Processing** *Natalie M. Elms, Catherine J. Mondloch, Daphne Maurer, William G. Hayward, Gillian Rhodes, Jim Tanaka, Guomei Zhou*

26.322 **It's more than just physical: The contribution of social category information to race-selective face aftereffects** *Emma Jaquet, Gillian Rhodes, William G. Hayward*

26.323 **Traditional facial tattoos disrupt face recognition processes** *Heather Buttle, Julie East*

Spatial Vision: Mechanisms 1

26.324 **Thin films as spectacles and contact lenses for aberration-corrected vision via brain adaptation to contrast** *Alex Zlotnik, Shai Ben Yaish, Oren Yehezkel, Michael Belkin, Zeev Zalevsky*

26.325 **The Visual Phantom Illusion Originates in "Higher" Cortical Areas, not V1** *Jonas Kubilius, Daniel D. Dilks, Chris I. Baker, Nancy Kanwisher*

26.326 **Two Contrast-Adaptation Processes: One Old, One New** *S. Sabina Wolfson, Norma Graham, Stephanie Pan*

26.327 **Contrast Discrimination in Noise and Classification Images** *John M. Foley, Craig K. Abbey*

26.328 **Perturbation Analysis of Perceptual Templates** *Steven Kies, Charles Chubb*

26.329 **Cross-talk between luminance-defined and contrast-defined detection processing revealed by asymmetric lateral spatial interactions** *M Izzuddin Hairol, Sarah J Waugh*

26.330 **Detecting overlapping luminance-defined and contrast-defined stimuli: cue combination for better detection?** *Sarah J Waugh, M Izzuddin Hairol*

26.331 **When noisy means cardinal: visual biases for cardinal orientations revealed by degrading stimulus identity** *Alessandro Tomassini, Joshua A. Solomon, Michael J. Morgan*

26.332 **Getting the most out of classification images** *Patrick J Mineault, Christopher C Pack*

26.333 **Dynamics of collinear facilitation: fast yet sustained** *Pi-Chun Huang, Robert Hess*

26.334 **Characterizing Joint Feature and Contrast Sensitivity of Human Observers** *Seong Taek Jeon, Zhong-Lin Lu, Barbara Dosher*

26.335 **Lateral facilitation is largely due to internal response enhancement** *Mikhail Katkov, Dov Sagi*

26.336 **The absence of a collinearity effect in second-order, contrast-modulation discrimination tasks** *Michael Kramer, Lynn Olzak*

26.337 **The effect of sustained/transient temporal modulation on the horizontal effect of contrast masking** *Yeon Jin Kim, Andrew M. Haun, Edward A. Essock*

26.338 **Filling-in in the periphery indicates that the collinear facilitation is similar to the fovea** *Maria Lev, Uri Polat*

26.339 **The effect of curvature on the grid illusions: Influence of a homunculus?** *Michael Levine, J. Jason McAnany, Jennifer Anderson*

26.340 **Second-order mechanisms do not process contrast-modulated orientation information optimally** *Lynn A. Olzak, Patrick J. Hibbeler*

26.341 **Fixational Eye Movements and Retinal Activity during a Single Visual Fixation** *Martina Poletti, Michele Rucci*

26.342 **Frequency-doubling in the early visual system underlies sensitivity to second-order stimuli** *Ari Rosenberg, T. Robert Husson, Atul K. Mallik, Naoum P. Issa*

26.343 **Spatiotemporal dynamics of the perception of dot displays** *Timothy N. Rubin, Charles F. Chubb, Charles E. Wright, Stefanie A. Wong, George Sperling*

Saturday, May 10, 2:30 - 6:30 pm
Poster Session, Royal Palm Ballroom 6-8

Lightness, Brightness and Luminance

26.401 **Bayesian model of the staircase Gelb effect** *Sarah R. Allred, Lynn J. Lohnas, David H. Brainard*

26.402 **Lightness perception has no anchor** *Barton L. Anderson, Chamila de Silva, Michael Whitbread*

26.403 **Spatial Filtering Versus Anchoring Accounts of Brightness in Staircase and Simultaneous Brightness Contrast Stimuli** *Barbara Blakeslee, Daniel Reetz, Mark McCourt*

26.404 **The role of articulation and proximity in the effect of depth on lightness** *Ana Radonjiæ, Oscar Escobar, Stephen Ivory, Alan Gilchrist*

26.405 **Ilumination Frameworks, Selective Attention, and Edge Integration in Lightness Perception** *Michael E. Rudd*

26.406 **Spatial scale models of lightness illusions: contrast, anchoring, and tunable filters** *Arthur Shapiro, Emily Knight, Zhong-Lin Lu*

26.407 **Albedo perturbation detection under illumination transformations: A dynamic analogue of lightness constancy** *Holly E. Gerhard, Laurence T. Maloney*

26.408 **Seeing Through White Clouds: When Local Occlusion Cues Fail** *Frédéric J.A.M. Poirier, Frédéric Gosselin, Martin Arguin*

26.409 **Coming to Terms With Lightness and Brightness: Effects of Stimulus Configuration and Instructions on Brightness and Lightness Judgments** *Mark McCourt, Barbara Blakeslee*

26.410 **Brightness, Darkness and the Perception of Surface Material** *Tony Vladusich*

26.411 **Measuring brightness induction during brief stimulus displays** *Alan Robinson, Virginia de Sa*

26.412 **The balance between transient and sustained temporal response varies across the V1 visual field map** *Hiroshi Horiguchi, Satoshi Nakadomari, Ayumu Furuta, Yoichiro Masuda, Kunihiro Asakawa, Takahiko Koike, Shigeyuki Kan, Masaya Misaki, Satoru Miyauchi, Brian Wandell*

26.413 **Effects of luminance contrast on visual responses in frontal eye field** *Richard Heitz, Geoffrey Woodman, Pierre Pouget, Jeremiah Cohen, Jeffrey Schall*

Perception and Action: Reaching and Grasping

26.414 **Identifying strategies for grasping objects with position uncertainty using empirical cost-to-go functions** *Vassilios Christopoulos, Paul Schrater*

26.415 **Visual uncertainty predicts grasping when monocular cues are removed but not when binocular cues are removed** *Simon Watt, Bruce Keefe, Paul Hibbard*

26.416 **Visually guided grasping and the Müller-Lyer illusion: As for pointing, the data look contradictory but in fact they are not** *Volker Franz, Nicola Bruno*

26.417 **Gaze strategies while grasping: What are you looking at?!** *Loni Desanghere, Jonathan Marotta*

26.418 **Adaptive grasping: Corrective processes after perturbations of object size** *Constanze Hesse, Volker Franz*

26.419 **Calibration of grasp orientation (and 'wiggle-room' for errors in object orientation perception)** *Mark Mon-Williams, Geoff P Bingham*

26.420 **Visually guided grasping: using a small stimulus set can lead to overestimation of the effectiveness of depth cues** *Bruce Keefe, Matthew Elsby, Simon Watt*

26.421 **No visual field advantage for visually-guided grasping movements made with the left hand** *Claudia L.R. Gonzalez, Liana E. Brown, Melvyn A. Goodale*

26.422 **Visible surface area and prehension movement patterns** *Jennifer Charles, Sam Kent, Erik Jansson, Mark Mon-Williams*

26.423 **Pointing and bisection in open and closed loop reaching in patients with hemispatial neglect** *Monika Harvey, Keith Muir, Ian Reeves, George Duncan, Katrina Livingstone, Hazel Jackson, Pauline Castle, Stephanie Rossit*

26.424 **The weight to spatial memory in visually-guided reaching increases with retinal eccentricity** *Laurel Issen, David C. Knill*

26.425 **Differential spatial integration for perception and action revealed by perceptual and visuomotor crowding** *Paul F. Bulakowski, Robert B. Post, David Whitney*

26.426 **Equivalent visuomotor adaptation for variable reach practice** *Jason Neva, Amaris Siegel, Denise Henriques*

26.427 **Visually Guided Reaching Using Proportional Rate Control of Disparity Tau: Data and Model** *Joe Anderson, Geoffrey Bingham*

Search 1

26.428 **Monetary reward does not cure the prevalence effect in a baggage-screening task** *Riccardo Pedersini, Michael J. Van Wert, Todd S. Horowitz, Jeremy M. Wolfe*

26.429 **Why don't people use memory when repeatedly searching though an over-learned visual display?** *Melina Kunar, Stephen Flusberg, Jeremy Wolfe*

26.430 **What does performance on one visual search task tell you about performance on another?** *Michael Van Wert, Nicole Nova, Todd Horowitz, Jeremy Wolfe*

26.431 **Videogamers excel at finding rare targets** *Mathias Fleck, Stephen Mitroff*

26.432 **The Psychophysics of Chasing** *Tao Gao, George E. Newman, Brian J. Scholl*

26.433 **More than Just Finding Color: Strategy in Global Visual Search is Shaped by Learned Target Probabilities** *Carrick Williams, Alexander Pollatsek, Kyle Cave, Michael Stroud*

26.434 **An effect of WM load on visual search guidance: Evidence from eye movements and functional brain imaging** *Hyejin Yang, Hwamee Oh, Hoi-Chung Leung, Gregory Zelinsky*

26.435 **Visual search guidance increases with a delay between target cue and search** *Joseph Schmidt, Gregory Zelinsky*

26.436 **Novice and Expert Performance on a Computerized Lifeguarding Task** *Lyndsey K. Lanagan-Leitzel, Cathleen M. Moore*

26.437 **Don't distract the searcher: search performance for X-ray security screening images is reduced with the addition of a simple mental arithmetic task** *Hayward J. Godwin, Tamaryn Menneer, Kyle R. Cave, Shaun Helman, Rachael L. Way, Nick Donnelly*

26.438 **Expected object position of two hundred fifty observers predicts first fixations of seventy seven separate observers during search** *Jason Droll, Miguel Eckstein*

26.439 **The role of meaning in visual search** *Nicole Gaid, Jennifer Mills, Laurie Wilcox*

26.440 **Using gaze measures to diagnose what guides search in complex displays** *Anne P. Hillstrom, Tamaryn Menneer, Nick Donnelly, Mel Krokos*

26.441 **Target overshoot when searching for a stationary target by moving a window or by moving a scene behind a stationary window** *Hanneke Liesker, Eli Brenner, Jeroen Smeets*

26.442 **Visual Search in Air Traffic Control: Altitude Correlated Depth Cues Enhance Conflict Detection** *Evan Palmer, Christopher Brown, Timothy Clausner, Philip Kellman*

26.443 **Layout following and visual search for web labels** *Sara Rigutti, Walter Gerbino, Carlo Fantoni*

26.444 **Applying models of visual search to map design** *Joshua Shive, Gregory Francis*

26.445 **Two categories of glaucoma patients tell us the contribution of peripheral vision on visual search** *Takako Yoshida, Teiko Kashiwada, Naoki Kajiwara, Kenji Kitahara, Tenji Wake*

Saturday, May 10, 2:30 - 6:30 pm
Poster Session, Orchid Ballroom

Scene Perception 1

26.501 **When two are one and one is two: Apparent motion, visible persistence, and scene organization** *Cathleen M Moore, Teresa Stephens*

26.502 **A distance principle of organization of the ventral visual stream** *Elinor Amit, Yaacov Trope, Galit Yovel*

26.503 **Decoding of natural scene categories from transformed images using distributed patterns of fMRI activity** *Eamon Caddigan, Dirk Walther, Li Fei-Fei, Diane Beck*

26.504 **Probability summation and phase spectrum are sufficient to support animal detection in multiple scenes** *Carl Gaspar, Guillaume Rousselet*

26.505 **Preserved house discrimination in a patient with acquired object agnosia** *Jennifer K E Steeves, Caitlin Mullin, Jean-François Démonet*

26.506 **Adaptation for individual places but not for place categories in scene-selective cortical regions** *Emily J. Ward, Whitney E. Parker, Alana M. Feiler, Russell A. Epstein*

26.507 **Mean representation beyond a shadow of a doubt: summary statistical representation of shadows and lighting direction** *Kristyn Sanders, Jason Haberman, David Whitney*

26.508 **The role of bias in human contour labeling** *James Christensen, James Todd*

26.509 **The effects of valence and attentional focus on the remembered size of objects in affective scenes** *Noah Sulman, Thomas Sanocki*

26.510 **Exploring aesthetic principles of spatial composition through stock photography** *Jonathan S. Gardner, Charless Fowlkes, Christine Nothelfer, Stephen E. Palmer*

Spatial Vision: Natural Images and Texture

26.511 **Why do we see some surfaces as reflective?** *Andrey DelPozo, Silvio Savarese, Derek Baker, Daniel J. Simons*

26.512 **Do colored highlights look like highlights?** *Shin'ya Nishida, Isamu Motoyoshi, Lisa Nakano, Yuanzhen Li, Lavanya Sharan, Edward Adelson*

26.513 **Is color patchy?** *Ali Yoonessi, Frederick Kingdom*

26.514 **Finding meaningful patterns in visual images** *Maria Michela Del Viva, Giovanni Punzi*

26.515 **The Frozen Face Effect: Why Static Photographs Don't Do You Justice** *Lica Iwaki, Jason Haberman, Robert B. Post, David Whitney*

26.516 **Temporal integration of high-level summary statistical representation** *Thomas Harp, Jason Haberman, David Whitney*

26.517 **Classification images estimated by generalized additive models** *Kenneth Knoblauch, Laurence Maloney*

26.518 **V1 responses to different types of luminance histogram contrast** *Cheryl Olman, Huseyin Boyaci, Fang Fang, Katja Doerschner*

26.519 **The development of natural image contrast sensitivity** *Dave Ellemberg, Aaron Johnson, Bruce Hansen*

26.520 **Local orientation and texture fixation statistics during free-viewing of natural scene images following brief adaptation** *Bruce C. Hansen, Robert F. Hess*

26.521 **Fixational Eye Movements and Retinal Activity across Multiple Visual Fixations** *Michele Rucci, Gaelle Desbordes, Antonino Casile*

26.522 **Contrast sensitivity in 1/f noise considered across spatial frequency band** *Andrew M. Haun, Edward A. Essock*

26.523 **Texture segmentation in natural images: Contribution of higher-order image statistics to psychophysical performance** *Curtis Baker, Ahmad Yoonessi, Elizabeth Arsenault*

26.524 **Knowing which channel is relevant does not improve performance in texture segmentation** *Nicolaas Prins*

26.525 **Analyzing Band-Selective Preattentive Texture Mechanisms** *Ian Scofield, Charles Chubb, George Sperling*

26.526 **Adaptive spatial integration of orientation signals over time** *Ben S. Webb, Tim Ledgeway, Paul V. McGraw*

26.527 **A view-point invariant texture descriptor** *Cornelia Fermuller, Yong Xu, Hui Ji*

Temporal Processing and Dynamics

26.528 **The continuous Wagon Wheel Illusion and the 'When' pathway of the right parietal lobe: an rTMS study** *Lorella Battelli, Rufin Van Rullen, Alvaro Pascual-Leone*

26.529 **Mislocalising flashes in time** *Eli Brenner, Jeroen B.J. Smeets*

26.530 **How TMS and stimulus off/on signals modulate feature integration** *Johannes Rüter, Frank Scharnowski, Thomas Kammer, Michael H. Herzog*

26.531 **A Cortical and a Sub-cortical Origin of Lateral Interactions in Perceived Temporal Variation** *Anthony D'Antona, Jan Kremers, Steven Shevell*

26.532 **Color modulation of temporal response to oriented stimulation in macaque V2** *Clinton Cooper, Benjamin Ramsden*

26.533 **Effects of context on visual temporal order judgments in RSVP** *Ekaterina Pechenkova*

26.534 **Perceptual latency of sound-induced visual bounce** *Shigekazu Takei, Waka Fujisaki, Shin'ya Nishida*

26.535 **The Toelz Temporal Topography Study: Mapping the visual field of temporal processing across the life span** *Dorothe A. Poggel, Claudia Calmanti, Bernhard Treutwein, Hans Strasburger*

26.536 **The Dynamics of Shape Coding for Glass Patterns** *Stéphane Rainville, Aaron Clarke*

26.537 **Retinotopic adaptation can influence the apparent duration of a visual stimulus** *Aurelio Bruno, Ýnci Ayhan, Alan Johnston*

26.538 **Apparent duration is influenced by the geometrical (perceptual) meaningfulness of the stimulus** *Marianne Maertens, Robert Shapley*

26.539 **A frequency sweep method for rapid estimation of visual delays** *Jeffrey B. Mulligan, Scott B. Stevenson*

26.540 **Poor temporal precision in judging the position of a moving object, imposed at a late stage of visual processing** *Alex Holcombe, Daniel Linares*

26.541 **Reaction times and perceptual judgments are atypical in autism** *Natalie Dill, Richard Krauzlis*

26.542 **Visual processing oscillation fossils** *Caroline Blais, Martin Arguin, Frédéric Gosselin*

26.543 **A model for temporal features of visual sensations evoked by a subretinal electrode array for restoration of vision** *Heval Benav, Robert Wilke, Alfred Stett, Eberhart Zrenner*

Sunday Sessions

Sunday, May 11, 8:30 - 10:00 am
Talk Session, Vista Ballroom

Perception and Action: How Dissociated Are They?

Moderator: Melvyn Goodale

8:30 am

31.11 **Preserved motion processing and visuomotor control in a patient with large bilateral lesions of occipitotemporal cortex** *Melvyn A. Goodale, Marla E. Wolf, Robert L. Whitwell, Liana E. Brown, Jonathan S. Cant, Craig S. Chapman, Jessica K. Witt, Stephen R. Arnott, Sarah A. Khan, Philippe A. Chouinard, Jody C. Culham, Gordon N. Dutton*

8:45 am

31.12 **Preserved processing of motion and dorsal stream functions in a patient with large bilateral lesions of occipito-temporal cortex** *Jody C. Culham, Jessica K. Witt, Kenneth F. Valyear, Gordon N. Dutton, Melvyn A. Goodale*

9:00 am

31.13 **A medial parieto-occipital area coding all phases of prehension movements** *Patrizia Fattori, Rossella Breveglieri, Nicoletta Marzocchi, Annalisa Bosco, Claudio Galletti*

9:15 am

31.14 **The Role of Monkey Frontal Eye Field in Visual Categorization** *Vincent Ferrera, Marianna Yanike, Carlos Cassanello*

9:30 am

31.15 **Hand-centered visual representation of space: TMS evidence for early modulation of motor cortex excitability** *Tamar R. Makin, Nicholas P. Holmes, Claudio Brozzoli, Yves Rossetti, Alessandro Farnè*

9:45 am

31.16 **Evidence from visuo-motor adaptation for two partially independent visuo-motor systems** *Lore Thaler, James Todd*

Sunday, May 11, 8:30 - 10:00 am
Talk Session, Royal Palm Ballroom 4-5

Search 2

Moderator: Greg Zelinsky

8:30 am

31.21 **ERP correlates of inter-trial effects in visual search** *Clayton Hickey, Jan Theeuwes*

8:45 am

31.22 **Configuration asymmetries in visual search** *Justin Jungé*

9:00 am

31.23 **A likelihood based metric to compare human and model eye movement fixations during visual search** *Wade Schoonveld, Miguel P. Eckstein*

9:15 am

31.24 **Eye can read your mind: Decoding eye movements to reveal the targets of categorical search tasks** *Gregory Zelinsky, Wei Zhang, Dimitris Samaras*

9:30 am

31.25 **Eye movements and saliency in a natural search task: evidence from visual agnosia** *Tom Foulsham, Jason Barton, Alan Kingstone, Richard Dewhurst, Geoffrey Underwood*

9:45 am

31.26 **PINK: the most colorful mystery in visual search** *Yoana Kuzmova, Jeremy Wolfe, Anina Rich, Angela Brown, Delwin Lindsey, Ester Reijnen*

Sunday, May 11, 10:30 am - 12:15 pm
Talk Session, Vista Ballroom

Motion Processing

Moderator: Duje Tadin

10:30 am

32.11 **Human Ocular Following and Natural Scene Statistics** *Jan Drewes, Frederic Barthelemy, Guillaume S. Masson*

10:45 am

32.12 **Predicting and computing 2D target motion for smooth-pursuit eye movements in macaque monkeys** *Guillaume Masson, Jérome Fleuriet, Anna Montagnini, Pascal Mamassian*

11:00 am

32.13 **Smooth pursuit eye movements generate spurious motion signals that create a motion after effect** *Peter Tse, Pojang Hsieh*

11:15 am

32.14 **Tuning properties of local-motion pooling units** *Mark Edwards, Kunjam Vallam, Kanupriya Kalia*

11:30 am

32.15 **Rapid generation of the motion after-effect by sub-threshold adapting stimuli** *Duje Tadin, Davis M Glasser*

11:45 am

32.16 **Psychophysical Measurements of Surround Suppression in 5-year-olds** *Terri Lewis, Allison Sekuler, Patrick Bennett*

12:00 pm

32.17 **Effects of onset-transients on the perception of visual motion** *Jan Churan, Farhan Khawaja, James Tsui, Alby Richard, Christopher Pack*

Sunday, May 11, 10:30 am - 12:15 pm
Talk Session, Royal Palm Ballroom 4-5

Attention: Neural Mechanisms and Models

Moderator: Geoff Woodman

10:30 am

32.21 **Inactivation of superior colliculus causes visual extinction** *Lee Lovejoy, Richard Krauzlis*

10:45 am

32.22 **Timing of target selection between visual cortex and frontal eye field** *Jeremiah Y. Cohen, Richard P. Heitz, Jeffrey D. Schall, Geoffrey F. Woodman*

11:00 am

32.23 **Effects of Frontal Eye Field Inactivation on Visual Responses of Area V4 Neurons** *Behrad Noudoost, Tirin Moore*

11:15 am

32.24 **Border ownership representation in human early visual cortex and its modulation by attention** *Fang Fang, Huseyin Boyaci, Daniel Kersten*

11:30 am

32.25 **Reflexive and Preparatory Selection and Suppression of Salient Information Iin the Right and Left Posterior Parietal Cortex** *Carmel Mevorach, Glyn Humphreys, Lilach Shalev*

11:45 am

32.26 **Parallel architectures in visual search within an eye movement** *Barbara Dosher, Zhong-Lin Lu, Songmei Han*

12:00 pm

32.27 **Computational Model of the Spatial Resolution of Visual Attention** *George Sperling, Ian Scofield, Arvin Hsu*

Sunday, May 11, 8:30 am - 12:30 pm
Poster Session, Royal Palm Ballroom 1-3

Faces: Neural Mechanisms 1

33.301 **The Magnetoencephalography M170 Response to Degraded Images** *Valerie Morash, Tharian Cherian, Pawan Sinha*

33.302 **Rapid extraction of stimulus phase information during complex object processing** *Guillaume Rousselet, Cyril Pernet, Patrick Bennett, Allison Sekuler*

33.303 **Early electrophysiological correlates of the influence of familiarity during face identity adaptation paradigm** *Caharel Stephanie, d'Arripe Olivier, Ramon Meike, Jacques Corentin, Rossion Bruno*

33.304 **Holistic facial representation is required for some but not all face processing: Evidence from event-related potentials** *Jennifer J. Heisz, Judith M. Shedden*

33.305 **The face-selective ERP component (N170) is correlated with the face-selective areas in the fusiform gyrus (FFA) and the superior temporal sulcus (fSTS) but not the occipital face area (OFA): a simultaneous fMRI-EEG study** *Galit Yovel, Boaz Sadeh, Ilana Podlipsky, Talma Hendler, Andrey Zhdanov*

33.306 **The Occipital Face Area is not necessary for symmetry perception in faces** *Anne-Sarah Caldara, Eugene Mayer, Roberto Caldara*

33.307 **Gaze direction is in the eye of the Superior Temporal Sulcus** *Roberto Caldara, Rob Jenkins, David Brennan, Barrie Condon, Donald Hadley, Eugene Mayer*

33.308 **Invariant Representation of Face Identity in the Fusiform Face Area (FFA): The Effect of External Facial Information** *Vadim Axelrod, Galit Yovel*

33.309 **Encoding of age-invariant identity versus identity-invariant age from faces: an fMRI-adaptation study** *Alla Sekunova, Chris Fox, Giuseppe Iaria, Jason Barton*

33.310 **Dynamic versus static stimuli for localization of the cerebral areas involved in face perception** *Giuseppe Iaria, Christopher J Fox, Jason J S Barton*

33.311 **Neural correlates of categorical face perception** *Ming Meng, Gaurav Singal, Tharian Cherian, Pawan Sinha*

33.312 **Ranking 96 object images by their activation of FFA** *Marieke Mur, Douglas Ruff, Jerzy Bodurka, Peter Bandettini, Nikolaus Kriegeskorte*

33.313 **Representation of 3D face shape and 2D surface reflectance in the Ventral Temporal Cortex** *Fang Jiang, Laurence Dricot, Volker Blanz, Rainer Goebel, Bruno Rossion*

33.314 **Behavioral and neural evidence for preserved holistic face detection in acquired prosopagnosia** *Laurence Dricot, Thomas Busigny, Bruno Rossion*

33.315 **Reversed visual field advantage for face matching in developmental prosopagnosia** *Brad Duchaine, Lucia Garrido*

33.316 **Training of familiar face recognition and visual scan paths for faces in a child with congenital prosopagnosia** *Laura Schmalzl, Romina Palermo, Melissa Green, Ruth Brunsdon, Max Coltheart*

33.317 **Cross-modal identity recognition in a patient with prosopagnosia** *Adria E.N. Hoover, Jean-François Démonet, Jennifer K.E. Steeves*

Perceptual Development Across the Lifespan

33.318 **Optics and Psychophysics in a Clinical Setting: Success of a Screening Battery for Assessing Visual Functioning in Human Infants** *Russell J. Adams, Doreen E. MacNeil, Christina Dove, Mary L. Courage*

33.319 **Cross-modal influences on low-level sensory processing early in development** *Vivian Ciaramitaro, Karen Dobkins*

33.320 **Spatial distribution of visual attention during childhood** *Valeria Reis, Ronald Ranvaud, Luiz Henrique Canto-Pereira*

33.321 **Array heterogeneity prevents catastrophic working memory failure in infants** *Jennifer M. Zosh, Lisa Feigenson*

33.322 **High-contrast contour integration and aging** *Eugenie Roudaia, Patrick J. Bennett, Allison B. Sekuler*

33.323 **Vision and Language: Recoding of visual representations** *Banchiamlack Dessalegn, Barbara Landau*

33.324 **The representation of the orientation of objects in children** *Emma Gregory, Michael McCloskey, Barbara Landau*

33.325 **Form and motion processing in preterm children** *Nicole M. Taylor, Lorna S. Jakobson, Daphne Maurer, Terri L. Lewis*

33.326 **High-density VEP measures of global form and motion processing in infants born very preterm** *Atkinson Janette, Birtles Dee, Anker Shirley, Braddick Oliver, Rutherford Mary, Cowan Frances, Edwards David*

33.327 **Orientation tuning in the visual cortex of human infants** *T. Rowan Candy, Thomas J. Baker, Anthony M. Norcia*

33.328 **Assessing the effect of aging on orientation selectivity of visual mechanisms with the steady state visually evoked potential** *Stanley Govenlock, Katrin Kliegl, Allison Sekuler, Patrick Bennett*

33.329 **Impact of luminance and blur combinations on older drivers' acuity and preferred speed** *Nathan Klein, Johnell Brooks*

33.330 **Life-Span study of visually driven postural reactivity: A fully immersive virtual reality approach** *Selma Greffou, Jocelyn Faubert*

33.331 **Age-related changes in the representational momentum effect** *Andrea Piotrowski, Lorna Jakobson*

Spatial Vision: Crowding and Eccentricity 1

33.332 **A crowded face influences the ensemble representation of a set of faces** *Jason Fischer, David Whitney*

33.333 **Visual Boundaries and Perceived Eccentricity: Evidence that Boundary Reduction Changes the Scale of Space** *Francesca Fortenbaugh, Lynn Robertson*

33.334 **The opposite of crowding revealed using classification images** *Isabelle Mareschal, Joshua Solomon, Michael Morgan*

33.335 **Amblyopic eyes are particularly susceptible to motion-induced distortions of space** *Paul McGraw, David Whitaker, Dennis Levi*

33.336 **Perceived spatial frequency varies as a function of location in the visual field** *Leila Montaser-Kouhsari, Marisa Carrasco*

33.337 **A Texture-Perception Model of Crowding for General Stimuli, Version 1.0** *Lisa Nakano, Ruth Rosenholtz, Benjamin Balas*

33.338 **Crowding and Feature Conjunction in Human Amblyopia** *Elizabeth Rislove, Dennis Levi*

33.339 **Configural modulation of crowding** *Toni Saarela, Bilge Sayim, Gerald Westheimer, Michael Herzog*

33.340 **Figural grouping affects contextual modulation in low level vision** *Bilge Sayim, Gerald Westheimer, Michael H. Herzog*

33.341 **Spatio-Temporal Map of Crowding in Normal and Amblyopic Vision** *Shuang Song, Dennis Levi*

33.342 **Mechanisms of Crowding and Learning to "Uncrowd"** *Gerald Sun, Susana T. L. Chung, Bosco S. Tjan*

33.343 **Crowding in the amblyopic fovea can be unlike crowding in the normal periphery** *Bosco S. Tjan, Anirvan S. Nandy, Susana T.L. Chung*

33.344 **Retinal mapping can distort to avoid the "impossible space" outside the visual field** *Daw-An Wu, Patrick Cavanagh*

33.345 **Evidence for misplaced target information with letter crowding** *Jun-Yun Zhang, Lei Liu, Cong Yu*

Sunday, May 11, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 6-8

3D Pictorial Cues

33.401 **Perceived Size Is Affected By Blur and Accommodation** *Robert Held, Martin Banks*

33.402 **"Where is the sun" for hemi-neglect patients?** *Marie de Montalembert, Laurent Auclair, Pascal Mamassian*

33.403 **The Preferred Angle of Illumination in Shape from Shading** *James O'Shea, Maneesh Agrawala, Martin Banks*

33.404 **Shape-from-shading for grating stimuli: slant is proportional to luminance, with some exceptions** *Andrew Schofield, Peng Sun*

33.405 **When are reflections useful in perceiving the shape of shiny surfaces?** *Silvio Savarese, Andrey Del Pozo, Derek Baker, Daniel J. Simons*

33.406 **High frequency textures provide better support for shape-from-shading than low frequency textures** *Peng Sun, Andrew Schofield*

33.407 **Effect of texture continuity on depth threshold** *Yoshitaka Fujii, Hirohiko Kaneko, Haruki Mizushina*

33.408 **Unmasking of orientation flows in 3-D shape perception** *Andrea Li, Qasim Zaidi*

33.409 **Matched Filters for 3-D Shape from Kernel-Based Image Analysis** *Carson Wong, Qasim Zaidi*

33.410 **Perception of Impossible Line Drawings by Pre-school Children** *Cho Kin Cheng, Albert Yonas*

33.411 **Perception of 3D shapes from line drawings** *Yunfeng Li, Zygmunt Pizlo*

33.412 **Detection of mirror-symmetry of a volumetric shape from its single 2D orthographic image** *Tadamasa Sawada, Zygmunt Pizlo*

33.413 **The role of perspective and angle polarity in perceiving 3D objects: Lessons from reverspectives** *Thomas Papathomas, Aleksandra Sherman, Anshul Jain*

33.414 **Ecological account for ground dominance: comparisons between terrestrial and arboreal primates** *Ayumi Sakai, Kazuo Fujita, Carole Parron, Joël Fagot*

33.415 **The ground surface advantage in change detection: coherent surface structure** *Zheng Bian, George Andersen*

33.416 **The Influences of Array Orientation and of Line Orientation on Visually Perceived Eye Level (VPEL) are Modulated by Line Length and Array Length** *Adam Shavit, Wenxun Li, Leonard Matin*

33.417 **Spatial Induction, Laterality, and Homogeneity of Perceived Space** *Wenxun Li, Leonard Matin*

Attention: Inattentional Blindness and Change Detection

33.418 **The effects of individual differences and task difficulty on inattentional blindness** *Daniel J. Simons, Melinda S. Jensen*

33.419 **Inattentional Blindness: Driver Compliance Rates at Pedestrian Crosswalks** *Katherine Olson*

33.420 **Effects of individual differences on the ability to detect changes in natural scenes** *Bonnie Angelone, Stephanie Severino*

33.421 **Proofreaders show a generalized ability to allocate attention to detect changes** *Michiko Asano, Shoko Kanaya, Kazuhiko Yokosawa*

33.422 **Change Blindness and Fearsome Objects** *Mark Brady, Jaryn Allen*

33.423 **Seeing changes without seeing what changed** *Gideon Caplovitz, Robert Fendrich, Howard Hughes*

33.424 **Competitive interaction for visual representation between and within hemifields** *Matthew Hayes, Khena Swallow, Yuhong V Jiang*

33.425 **Change blindness for relatively moving target as a result of a single mudsplash** *Makoto Ichikawa*

33.426 **The probability of change influences attentional allocation in foreground- background segmentation** *Takashi Kabata, Eriko Matsumoto*

33.427 **The effects of active attention on the change detection task** *Takuma Murakoshi, Yoshihisa Osada*

Perceptual Learning 2

33.428 **Preference in a stochastic visual cognitive task with probability information learned through experience** *Julia Trommershauser, Pascal Mamassian, Laurence T. Maloney*

33.429 **Decision making in an uncertain video game environment** *Charles Benson, Daniel Kersten, Paul Schrater*

33.430 **Video Game Playing Enhances Practical Attentional Skills** *Greg West, Sara Stevens, Carson Pun, Jay Pratt*

33.431 **Playing Action Video Games Enhance Visual Sensitivity** *Renjie Li, Uri Polat, Daphne Bavelier*

33.432 **Effects of training on perceptual salience** *Farhan Baluch, Laurent Itti*

33.433 **Sensitivity of Implicit Visual Rule-learning to the Saliency of the Stimuli** *Kimberly MacKenzie, Jozsef Fiser*

33.434 **Reinforcement learning and the acquisition of perceptual expertise in ERPs** *Lara Pierce, Olav Krigolson, Jim Tanaka, Clay Holroyd*

33.435 **Rapid reorganization in the adult human visual system** *Daniel D. Dilks, Chris I. Baker, Yicong Liu, Nancy Kanwisher*

33.436 **Reward contingency on perceptual learning does not follow rules of classical conditioning** *Dongho Kim, Aaron Seitz, Takeo Watanabe*

33.437 **Task-irrelevant perceptual learning occurs only when the irrelevant feature is weak** *Yoshiaki Tsushima, Aaron Seitz, Takeo Watanabe*

33.438 **Roving in perceptual learning: stimulus interference and overlapping neural populations** *Elisa M. Tartaglia, Kristoffer C. Aaberg, Michael H. Herzog*

33.439 **Adaptation induced temporal compression is highly space specific** *Inci Ayhan, Aurelio Bruno, Alan Johnston*

33.440 **Task space calibration in Cartesian coordinates** *Sinéad Sheehan, Geoffrey P. Bingham, Mark Mon-Williams*

Sunday, May 11, 8:30 am - 12:30 pm Poster Session, Orchid Ballroom

Higher Cortical Processing

33.501 **TMS-induced oscillations in orientation discriminations** *Javier Garcia, Ramesh Srinivasan, Emily Grossman*

33.502 **Frontal Eye Field and Visual Motion Discrimination: a Transcranial Magnetic Stimulation study** *Marie-Helene Grosbras, Jason Lauder*

33.503 **Degraded eye proprioception after 1Hz rTMS over the anterior parietal cortex** *Daniela Balslev, Chris Miall*

33.504 **Improving the signal-to-noise ratio of the visual P300** *Sven P. Heinrich, Dominik Mell, Michael Bach*

33.505 **Electrophysiological evidence for the role of extrastriate visual cortex in visual awareness** *Giorgio Fuggetta, Juha Silvanto, Neil Muggleton, Enea Pavone, Matteo Feurra, Luisa Sartori, Carlo Marzi, Vincent Walsh*

33.506 **The role of feedback in visual masking, visual awareness and attention** *Stephen Macknik, Susana Martinez-Conde*

33.507 **Neural correlate of visual awareness in the superior colliculus of the animal model of blindsight** *Masatoshi Yoshida, Kana Takaura, Tadashi Isa*

33.508 **No McCollough effect in a patient with cerebral achromatopsia but spared V1** *Caitlin Mullin, Jean-François Démonet, Jennifer K E Steeves*

33.509 **Cortical Lesion Projection Zone Activity in Retinal Disease Patients is Caused by Object-Specific Feedback, Not Plasticity** *Benjamin J. Rosenau, Adam S. Greenberg, Janet S. Sunness, Steven Yantis*

33.510 **Response lateralisations in visuo-motor cortex and consequences of abnormal visual input** *Barbara Wolynski, Martin Kanowski, Michael B Hoffmann*

33.511 **Does cortical reorganization lead to a corresponding change in readout?** *Ehud Zohary, Danny Dilks, Nancy Kanwisher, Alvaro Pascual-Leone*

33.512 **Object representations in the dorsal pathway: fMRI adaptation effects in macaque posterior parietal cortex** *Christina Konen, Mark Pinsk, Michael Arcaro, Sabine Kastner*

33.513 **Repetition suppression and category selectivity in the human ventral stream: fMRI evidence for the scaling model** *Kevin Weiner, Kalanit Grill-Spector*

33.514 **Colour and texture processing in human extrastriate cortex: An fMRI study** *Ryan Wilson, Pauline Pearson, Lorna Jakobson, Bruce Bolster, Jonathan Marotta, Uta Sboto-Frankenstein*

33.515 **Identification and characterization of the Visual Character Form Area (VCFA) in Chinese readers and illiterates** *Sheng He, Lifei Ma, Yi Jiang, Qiyong Gong, Haicheng Liu, Xiaohua Cao, Yuan Deng, Hsuan-Chih Chen, Xuchu Weng*

Multiple Object Tracking 2

33.516 **Object-specific preview benefit enhanced during explicit Multiple Object Tracking** *Harry Haladjian, Zenon Pylyshyn*

33.517 **What limits performance in multiple object tracking?** *Michael Frank, Edward Vul, Vikash Mansinghka, George Alvarez*

33.518 **Online measurement of dynamic changes in tracking load** *Trafton Drew, Todd S. Horowitz, Jeremy M. Wolfe, Edward K. Vogel*

33.519 **Separating specific from general learning in a napping paradigm on Multiple Object Tracking and Rotary Pursuit tasks** *Sara C. Mednick, Denise J. Cai, Cory Rieth, Jennifer Kanady, Todd S. Horowitz*

33.520 **Multiple object tracking is surprisingly robust to abrupt onsets** *Anina Rich, Michael Van Wert, Michael Cohen, Todd Horowitz*

33.521 **Object localization at speeds below and above the attentive tracking limit** *Daniel Linares, Alex White, Alex Holcombe*

33.522 **The interdependence between multiple attentional foci in attentive tracking** *Tal Makovski, Yuhong V. Jiang*

33.523 **Attention to the Center of the Target Array During Multiple Object Tracking** *Hilda Fehd, Adriane Seiffert*

33.524 **Spatial Attention in Multiple Object Tracking: Evidence from ERPs** *Matthew M. Doran, James E. Hoffman*

33.525 **Abrupt viewpoint changes during multiple object tracking** *Markus Huff, Georg Jahn, Stephan Schwan*

33.526 **Contour Interpolation Affects Multiple Object Tracking** *Everett Mettler, Brian Keane, Philip Kellman*

33.527 **A Dynamic Neural Field Model of Multi-Object Tracking** *John Spencer, Sammy Perone*

33.528 **Impact of stereoscopic vision and 3D representation of visual space on multiple object tracking performance** *David Tinjust, Remy Allard, Jocelyn Faubert*

33.529 **Early Adulthood Losses in the Effective Number of Tracked Trajectories in Human Vision** *Srimant Tripathy, Graeme Kennedy, Brendan Barrett*

Object Perception: Recognition and Categorization

33.530 **Rapid Object Category Detection in Visually Degraded Stimuli** *Chetan Nandakumar, Jitendra Malik*

33.531 **Do you know what it is as soon as you know it is there?** *Jihyun Kim, Sang Chul Chong*

33.532 **Dissociating Detection and Categorization: As Soon as You Know It Is There, You Don't Necessarily Know What It Is** *Michael L. Mack, Thomas J. Palmeri*

33.533 **2D images are not sufficient for testing 3D object recognition** *William Hayward, Achille Pasqualotto*

33.534 **Effects of viewing time and viewpoint changes on 3D shape recognition: evidence for the role of nonvolumetric primitives in 3D shape representation** *Irene Reppa, Charles Leek*

33.535 **Learning sequence of views of three-dimensional objects: The effect of temporal coherence on object memory** *Taosheng Liu*

33.536 **Three-quarter view is good because object orientation is uncertain** *Ryosuke Niimi, Kazuhiko Yokosawa*

33.537 **Position Independence in Object Recognition** *Dwight Kravitz, Latrice Vinson, Chris Baker*

33.538 **The Relationship Between Local Feature Distributions and Object Recognition** *Henry Galperin, Peter Bex, József Fiser*

33.539 **Interaction between outline shape and surface-property processing in object recognition** *Jonathan S. Cant, Melvyn A. Goodale*

33.540 **Task characteristics modulate the impact of action similarity on visual object identification** *Genevieve Desmarais, Mike Dixon, Eric A. Roy*

33.541 **Novelty vs. familiarity principles in preference decision: Task-context of memory matters** *Hsin-I Liao, Shinsuke Shimojo*

Sunday, May 11, 2:30 - 4:00 pm
Talk Session, Vista Ballroom

Cross-Modal Interactions

Moderator: Eli Brenner

2:30 pm

34.11 **Revisiting the Molyneux Question** *Richard Held, Yuri Ostrovsky, Beatrice deGelder, Pawan Sinha*

2:45 pm

34.12 **Hearing motion in "the mind's ear" - evidence for a vision-to-sound synesthesia** *Melissa Saenz, Christof Koch*

3:00 pm

34.13 **Time-space associations in synaesthesia: When input modality matters** *Michelle Jarick, Mike Dixon, Emily Maxwell, Daniel Smilek*

3:15 pm

34.14 **Amodal Multimodal Integration** *Massimiliano Di Luca, Marc Ernst, Wendy Adams*

3:30 pm

34.15 **Visual Information in the Ascending Auditory Pathway** *Dave Bulkin, Uri Werner-Reiss, Jennifer Groh*

3:45 pm

34.16 **An irrelevant sound can change peri-saccadic mislocalisation** *Femke Maij, Eli Brenner, Jeroen Smeets*

Sunday, May 11, 2:30 - 4:00 pm
Talk Session, Royal Palm Ballroom 4-5

Faces: Neural Mechanisms 2

Moderator: Kalanit Grill-Spector

2:30 pm

34.21 **Individual differences in face cognition: Distinct component abilities and basic neural processes** *Grit Herzmann, Olga Kunina, Oliver Wilhelm, Werner Sommer*

2:45 pm

34.22 **Task-specific feature codes for face processing** *Adrian Nestor, Michael Tarr*

3:00 pm

34.23 **Stronger face-selective responses to typical versus distinctive faces when stimulus variability is controlled** *Nicolas Davidenko, David Remus, Michael Ramscar, Kalanit Grill-Spector*

3:15 pm

34.24 **The Effects of Parts, Wholes, and Familiarity on Face-Selective Responses in MEG** *Alison Harris, Geoffrey Aguirre*

3:30 pm

34.25 **EEG correlates of categorical and graded face perception** *Margaret Moulson, Benjamin Balas, Charles Nelson, Pawan Sinha*

3:45 pm

34.26 **The neural and behavioral plasticity of other-race face recognition** *James Tanaka, Lara Pierce*

Sunday, May 11, 4:30 - 6:15 pm
Talk Session, Vista Ballroom

Binocular Mechanisms 2

Moderator: Martin Banks

4:30 pm

35.11 **The Reliability of Disparity Signals Affects Slant Anisotropy** *Heather R. Filippini, Martin S. Banks*

4:45 pm

35.12 **Binocular slant discrimination beyond interaction space** *Robert S. Allison, Barbara J. Gillam, Stephen A. Palmisano*

5:00 pm

35.13 **Using Focus Cues in Solving the Binocular Correspondence Problem** *David M. Hoffman, Martin S. Banks*

5:15 pm

35.14 **Distinct Neural Signatures of Motion-Induced Blindness in Human Visual Cortex** *Tobias Donner, Dov Sagi, Yoram Bonneh, David Heeger*

5:30 pm

35.15 **The Human Cortical Network for Coherent Stereomotion Processing** *Lora Likova, Christopher Tyler*

5:45 pm

35.16 **The Dynamics of Binocular Combination** *Christopher Tyler*

6:00 pm

35.17 **Functional specialisation for the perception of disparity-defined depth in the human visual cortex** *Andrew Welchman, Tim Preston, Sheng Li*

Sunday, May 11, 4:30 - 6:15 pm
Talk Session, Royal Palm Ballroom 4-5

Decision and Reward

Moderator: Dana Ballard

4:30 pm

35.21 **Human eye movements correlate with intrinsic reward structure in natural visuomotor tasks** *Constantin Rothkopf, Dana Ballard*

4:45 pm

35.22 **Learning probability and reward through experience: Impact of value structure on reach planning** *Erik Schlicht, Shin Shimojo, Ken Nakayama*

5:00 pm

35.23 **Learning to behave optimally in a probabilistic environment** *Anna Seydell, Brian McCann, Julia Trommershaeuser, David Knill*

5:15 pm

35.24 **Neural correlates of value and probability in decision under risk and in an equivalent visuo-motor task** *Shih-Wei Wu, Laurence Maloney*

5:30 pm

35.25 **Overlapping representation of juice and video rewards in primate OFC** *Michael Campos, Kari Koppitch, Richard A. Andersen, Shinsuke Shimojo*

5:45 pm

35.26 **Target selection for visually-guided reaching in the dorsal premotor area during a visual search task** *Joo-Hyun Song, Robert M. McPeek*

6:00 pm

35.27 **Homo economicus in visual search** *Vidhya Navalpakkam, Christof Koch, Pietro Perona*

Sunday, May 11, 2:30 - 6:30 pm
Poster Session, Royal Palm Ballroom 1-3

Attention: Object-based Selection

36.301 **The time course of neural activity in object-based visual attention** *Linda Moya, Sarah Shomstein, Anto Bagic, Marlene Behrmann*

36.302 **Differences in object-based attention in the foreground and background** *Alice Albrecht, Alexandra List, Lynn Robertson*

36.303 **Object–oriented perception of emotional information** *Carys K. Ball, Jane E. Raymond*

36.304 **Neural fate of unattended features in object-based encoding** *Yaoda Xu*

36.305 **Object-Based Attention: Attentional Certainty vs. Attentional Shifting** *Leslie Drummond, Sarah Shomstein*

36.306 **Attention does not automatically spread to all features of an object** *Edward Ester, Edward Awh, Edward Vogel, John Serences*

36.307 **Category expectation modulates object-selective cortical activity** *Michael Esterman, Steven Yantis*

36.308 **Object attention in extended objects has few effects on accuracy** *Shiau-hua Liu, Barbara A. Dosher, Zhong-lin Lu*

36.309 **Effects of Object Structure on Object-Based Attention** *W. Trammell Neill, Bryan R. Burnham, Patrick A. O'Connor, Yongna Li*

36.310 **The effect of awareness on hemispheric asymmetries in object-based processing** *Lynn Robertson, Alice Albrecht, Francesca Fortenbaugh, Daria Antonenko*

36.311 **Attention increases the perceived strength of illusory contours** *Joshua Wede, Gregory Francis*

36.312 **Feature binding through anticipatory inhibition** *Zhe Chen*

Color Perception

36.313 **Unique hue isochromes in the equiluminant plane** *Alexander D. Logvinenko, Tieying Lu*

36.314 **Simultaneous Color Contrast, Afterimages and Metameric Intransitivity: Novel Effects and Explanation of Previously Enigmatic Results** *Eric Altschuler, Abigail Huang, Alice Hon, Jessica Goris-Rosales, Chris Tyler*

36.315 **Switch color afterimages depend on the luminance of the viewing surface** *Daniel VanHorn, Gregory Francis*

36.316 **Color contrast effect under natural and unnatural viewing conditions** *Yoko Mizokami, Chihiro Tanaka, Hirohisa Yaguchi*

36.317 **What L/M cone-signal pooling is consistent with the Rayleigh matches of carriers of deuteranopia?** *Yang Sun, Steven Shevell*

36.318 **The influence of object identity on lightness constancy** *Suncica Zdravkovic*

36.319 **Impossible transparency becomes possible also without stratification indexes: a new example of illusory transparency due to motion** *Daniela Bressanelli, Simone Gori*

36.320 **A Microphotogoniometer for the Measurement of Gloss and its Correlation with Visual Perception** *Kelly Rutan, John Pospisil, Paul Sacoto*

36.321 **Perception of the diffuseness of the light source and of the number of light sources in photographs of real objects is predicted by image statistics regardless of shape and material of the objects** *Susan F. te Pas, Sylvia C. Pont*

36.322 **Neural Pathways of Induced Steady Color Shifts Caused by Temporally Varying Context** *Jens Christiansen, Anthony D'Antona, Steven Shevell*

36.323 **Colour dissimilarities under neutral light sources differing in intensity measured using two competing methods** *Rumi Tokunaga, Alexander D. Logvinenko, Laurence T. Maloney*

36.324 **Categorical color perception in natural scenes under different illuminants** *Kinjiro Amano, David Foster*

36.325 **Colour constancy for real 3D and 2D scenes under typical and atypical illuminant changes** *Monika Hedrich, Alexa I. Ruppertsberg, Marina Bloj*

36.326 **The structure of color space is largely invariant under illuminant changes** *Maria Olkkonen, Thorsten Hansen, Karl Gegenfurtner*

36.327 **Searching for variegated elements** *Patrick Monnier*

36.328 **Perception of neon color spreading in 3- to 6- month old infants** *Jiale Yang, So Kanazawa, Masami K Yamaguchi*

36.329 **Categorical discrimination of colour** *Christoph Witzel, Thorsten Hansen, Karl R. Gegenfurtner*

36.330 **Diversity in English color name usage** *Delwin Lindsey, Angela Brown*

36.331 **Color Naming Based on Clinical Visual Condition: A Surprising Interaction** *James Nolan, Shannon Riley, Susan Loveall*

36.332 **The color of music** *Karen B. Schloss, Patrick Lawler, Stephen E. Palmer*

36.333 **An EOG-assisted Saccade-contingent Color Breakup-free Display** *Wei-Chung Cheng, Chih-Nan Wu, Chih-Lei Wu*

Perceptual Organization: Contours

36.334 **Grouping of Shape by Perceptual Closure: Effects of Spatial Proximity and Collinearity** *Bat-Sheva Hadad, Ruth Kimchi*

36.335 **Misalignment Constraints on Visual Interpolation** *James Hilger, Philip Kellman*

36.336 **Contour interpolation and lightness induction mechanisms interact to produce classification image features in a shape discrimination task** *Brian Keane, Hongjing Lu, Philip Kellman*

36.337 **Figural constraints on contour discontinuity detection** *Slobodan Markovic*

36.338 **Connection structures underlying human contour integration** *Nadja Schinkel-Bielefeld, Udo Ernst, Sunita Mandon, Simon Neitzel, Andreas Kreiter, Klaus Pawelzik, Ruth Rosenholtz*

36.339 **Spatial localization of interpolated contours** *Branka Spehar, Victor Halim*

36.340 **Contour and surface integration behind moving occluder** *Hideyuki Unuma, Hisa Hasegawa, Philip J Kellman*

36.341 **Spatial averaging of afterimages between contours** *Mark Vergeer, Stuart Anstis, Rob van Lier*

36.342 **Spatio-temporal neuronal interactions as a basis for perceptual binding** *Anna Sterkin, Alexander Sterkin, Uri Polat*

36.343 **Behavioral Evidence for the Perception of Kanizsa Illusory Contours in Pig-tailed Macaque Monkeys (M. nemestrina)** *Kimberly Feltner, Lynne Kiorpes*

36.344 **Photographic Exploration of Illusory Contours** *D. Alan Stubbs, Consatnce Stubbs*

36.345 **Random and systematic effects of neural noise on low-level and high-level pattern vision** *Timothy D. Sweeny, Marcia Grabowecky, Ken A. Paller, Satoru Suzuki*

Sunday, May 11, 2:30 - 6:30 pm
Poster Session, Royal Palm Ballroom 6-8

Motion: Space and Speed

36.401 **Analysis of shape-dependent specular motion - predicting shiny and matte appearance** *Katja Doerschner, Daniel Kersten, Paul Schrater*

36.402 **Motion perception driven by inferred shape properties** *Elias H. Cohen, Qasim Zaidi*

36.403 **Exploring the spatiotemporal properties of fractal rotation** *Sarah Lagacé-Nadon, Rémy Allard, Jocelyn Faubert*

36.404 **Motion of motion-defined pattern does not induce spatial mislocalization** *Kazushi Maruya, Ryota Kanai, Takao Sato*

36.405 **The transient temporal processing system contributes to motion perception in a static figure** *Rumi Hisakata, Ikuya Murakami*

36.406 **Effects of Spatial Cue Timing and Relevance on Representational Momentum** *Timothy L. Hubbard, Anuradha Mohan Kumar, Charlotte L. Carp*

36.407 **Support for a postdictive account of the flash-lag effect** *Michael Cohen, Piers Howe, Todd Horowtiz, Jeremy Wolfe*

36.408 **Non-reversed motion perception induced by the spatiotemporal reversal of apparent motion sequences** *Souta Hidaka, Masayoshi Nagai, Jiro Gyoba*

36.409 **Isodipole textures in spacetime: a novel non-Fourier and reverse-phi motion stimulus** *Qin Hu, Jonathan Victor*

36.410 **Possible mechanisms for pedestal effects on speed perception** *David Nguyen-Tri, Jocelyn Faubert*

36.411 **The perceived duration of motion increases with speed** *Ikuya Murakami, Sae Kaneko*

36.412 **Blur increases perceived speed** *Maryam Vaziri Pashkam, Patrick Cavanagh*

36.413 **The role of explicit and implicit standards in speed discrimination** *Hideko F. Norman, J. Farley Norman, Kristina F. Pattison, Amy E. Craft, Elizabeth Y. Wiesemann, M. Jett Taylor*

Perception and Action: Goal Directed Movements

36.414 **Shared Effects of Prior Information and Reward on Motor and Perceptual Choices** *Dorion Liston, Leland Stone*

36.415 **Visuomotor planning cannot take advantage of conscious knowledge of future events** *Robert L. Whitwell, Lisa Lambert, Melvyn A. Goodale*

36.416 **Perceptual and performance biases in action selection** *Andrew Wilson, Elsje van Bergen, Lisa van Swieten, Samuel Kent, Mark Mon-Williams*

36.417 **Learning and retaining visuomotor adaptation across time** *Milad Modabber, Jason Neva, Manvir Gill, Ian Budge, Denise Henriques*

36.418 **Predispositions to Approach and Avoid are Contextually Sensitive and Goal Dependent** *Susan Bamford, Robert Ward*

36.419 **Seeing all the obstacles in your way: The effect of visual feedback on obstacle avoidance** *Craig Chapman, Dustin Kirshen, Melvyn Goodale*

36.420 **Visuomotor performance and visuomotor memory operate without conscious awareness of intrinsic target features** *Matthew Heath, Kristina Neely, Jason Yakimishyn, Gord Binsted*

36.421 **Estimates of performance in a visuo-motor task are accurate, but not after joint movement is constrained** *Uta Wolfe, Holly Gerhard, Sam LaCasse, Laurence Maloney*

36.422 **Perceptual Information for the Control of Walking-to-Reach** *Geoffrey Bingham, Joe Anderson*

36.423 **Do walkers follow their eyes? Further tests of the gaze-angle strategy for steering control** *Michael Cinelli, William Warren, Mark Hollands*

36.424 **Comparing the impact of incorrect object identification on object use to the impact of incorrect action production on naming objects** *Asmaa Dabbagh, Genevieve Desmarais, Eric Roy, Michael Dixon*

36.425 **Motor extrapolation of occluded spatiotemporal contours** *Jacqueline Fulvio, Todd Hudson, Laurence Maloney*

36.426 **Sensitivity of visuomotor control to real and to illusory size** *Tzvi Ganel, Eran Chajut*

36.427 **The Effect of Intention and Bodily Capabilities on the Perception of Size** *Sally Linkenauger, Dennis Proffitt*

36.428 **Reconsidering the role of action in perceiving the catchability of fly balls** *Brett Fajen, Gabriel Diaz, Christopher Cramer*

36.429 **Intercepting moving targets: A little foresight helps a lot** *Gabriel Diaz, Flip Phillips, Brett Fajen*

36.430 **Baseball's Paradoxical Pop Up: Physics and Fielder Control Strategy can Lead to Lurching** *Michael K. McBeath, A. Terry Bahill, Alan M. Nathan, David G. Baldwin*

36.431 **Preserved visual abilities following large bilateral lesions of the occipitotemporal cortex** *Marla E. Wolf, Robert L. Whitwell, Liana E. Brown, Jon S. Cant, Craig Chapman, Jessica K. Witt, Stephen R. Arnott, Sarah A. Khan, Philippe A. Chouinard, Jody C. Culham, Gordon N. Dutton, Melvyn A. Goodale*

Reading

36.432 **What is the visual word form area encoding? An adaptation study contrasting handwriting with word identity** *Jason J S Barton, Christopher J Fox, Alla Sekunova, Giuseppe Iaria Iaria*

36.433 **The visual cortical 'word form area' is selective for high spatial frequencies in humans but not monkeys** *Natalia Y. Bilenko, Reza Rajimehr, Jeremy C. Young, Roger B. H. Tootell*

36.434 **Contrast Polarity in Letter Identification** *Lauren Scharff, Albert Ahumada*

36.435 **Visual spread reading: Noisy letters in their natural context** *Martin Arguin, Frédéric J. A. M. Poirier, Frédéric Gosselin*

36.436 **Reading Horizontal and Vertical English Text** *Deyue Yu, David Gerold, Heejung Park, Gordon E. Legge*

36.437 **User Interface Software for Low Vision Access to the Internet** *Jianwei Lu, Aries Arditi*

Sunday, May 11, 2:30 - 6:30 pm Poster Session, Orchid Ballroom

Eye Movements

36.501 **The effect of attention size and information density on saccadic adaptation during real-world image search** *Tyler W. Garaas, Marc Pomplun*

36.502 **Effects of age, target characteristics, and viewing distance on ocular counterroll in healthy humans** *Herb Goltz, Joanne Leung, Giuseppe Mirabella, Khaled Abuhaleeqa, Linda Colpa, Alan Blakeman, Agnes Wong*

36.503 **Behavioral genetic evidence for plasticity in the oculomotor system** *Jeremy Wilmer, Benjamin Backus*

36.504 **Eye Movement Strategies in a Fixation Search Task: Humans versus Models** *Chris Bradley, Bill Geisler*

36.505 **Visual saliency re-visited: Center-surround patterns emerge as optimal predictors for human fixation targets** *Felix Wichmann, Wolf Kienzle, Bernhard Schölkopf, Matthias Franz*

36.506 **Fixation Region Overlap Analysis (FROA) - A Data Driven Approach To Hypothesis Testing Using Eye Gaze Fixation Data** *Stephen Johnston, Charles Leek*

36.507 **Perisaccadic mislocalization in slow saccades** *Florian Ostendorf, Lorenz Schoder, Sarah Stricker, Christoph Ploner*

36.508 **Microsaccades drive illusory motion in "Enigma"** *Xoana Troncoso, Stephen Macknik, Jorge Otero-Millan, Susana Martinez-Conde*

36.509 **Disruption of Voluntary Saccade Commands by Abruptly Appearing Visual Stimuli** *Kitty Xu, Jay Edelman*

36.510 **Eye Movement Strategies: A Comparison between Individuals with Normal Vision and Simulated Scotomas** *R. Zhou, A. Johnson, R. Gurnsey, M. von Grünau*

36.511 **Effect of central scotoma on eye movement behavior** *Laura Renninger, Linh Dang, Preeti Verghese, Donald Fletcher*

36.512 **Mean Gaze Duration Validates Self-Reports of Image Importance** *John Pospisil, Kelly Rutan*

36.513 **Inverting faces does not abolish cultural diversity in eye movements** *David Kelly, Rachael Jack, Caroline Blais, Anne-Sarah Caldara, Bruno Rossion, Christoph Scheepers, Roberto Caldara*

36.514 **Unusual mechanism of monocular oscillopsia** *Laurence Jasse, Alain Vighetto, Sandra Vukusic, Denis Pelisson, Laure Pisella, Caroline Tilikete*

36.515 **Training eye movements: can training people where to look hinder the processing of fixated objects?** *Richard Dewhurst, David Crundall*

36.516 **Gain of cyclovergence as a function of stimulus location** *Nicole T. Daniels, Ian P. Howard, Robert S. Allison*

36.517 **Translators' Ocular Measures and Cognitive Loads during Translation** *Vincent Chieh-ying Chang, Fabiana Gordon, Mark Shuttleworth, Gabriela Saldanha*

36.518 **Mental Rotation of Real Word Shepard-Metzler Figures: An Eye Tracking Study** *Shannon Fitzhugh, Thomas F. Shipley, PhD, Nora Newcombe, PhD, Kathleen McKenna, Dominique Dumay*

Object Perception 1

36.519 **Dissociation of Egocentric and Object-Centric Processing in Mental Rotation of Hand: Effect of Viewpoints of the Visual Stimulus and the Viewers' Own Hands** *Wei-Dong Tao, Jing-Jiang Yan, Qiang Liu, Hong-Jin Sun*

36.520 **Mental rotation: Cross-task training and generalization** *Debi Stransky, Adam Dubrowski, Heather Carnahan, Laurie Wilcox*

36.521 **How long does it take for the visual environment to influence the perceptual upright?** *Bahar Haji-Khamneh, Richard T. Dyde, Jeff Sanderson, Michael R. M. Jenkin, Laurence R. Harris*

36.522 **Letter identity misplaced in space and time** *Arielle Veenemans, Thomas A. Carlson, Daw-An Wu, Frans Verstraten*

36.523 **Eccentric features integrate slowly** *Alissa R. Cantone, Katharine A. Tillman, Denis G. Pelli*

36.524 **Connectedness and Inside/Outside Relation Affect Dot Numerical Judgment: Implications for Perceptual Objects Defined by Topological Attributes** *Lixia He, Tiangang Zhou, Jun Zhang, Lin Chen, Yan Zhuo*

36.525 **Unseen objects can contribute to visual size averaging** *Heeyoung Choo, Steven Franconeri*

36.526 **Visual statistical learning: spatial configuration or abstract association?** *Stephanie Manchin, Dwight Kravitz, Chris Baker*

36.527 **Characterizing the shape and texture of natural objects using Active Appearance Models** *Krista A. Ehinger, Aude Oliva*

Smooth Pursuit and Perception

36.528 **Object recognition during eye movements** *Doris I. Braun, Alexander C. Schütz, Karl R. Gegenfurtner*

36.529 **The control of gaze in dynamic random noise displays** *Christoph Rasche, Karl Gegenfurtner*

36.530 **Selection of Superimposed Surfaces by Speed** *Illia Tchernikov, Mazyar Fallah*

36.531 **Hering's Law Tested with the Pursuit Theory of Motion Parallax** *Mark Nawrot, Lindsey Joyce*

36.532 **Selection of Superimposed Surfaces by Density** *Hayley Buchholz, Mazyar Fallah*

36.533 **Improvement of chromatic temporal resolution during smooth pursuit eye movement** *Masahiko Terao, Junji Watanabe, Akihiro Yagi, Shin'ya Nishida*

36.534 **Smooth pursuit eye movements and the prediction of visual motion** *Miriam Spering, Alexander C. Schuetz, Karl R. Gegenfurtner*

36.535 **Scaling of anticipatory smooth pursuit eye movements with target speed probability** *David Souto, Anna Montagnini, Guillaume S. Masson*

36.536 **Superior colliculus inactivation biases target selection for smooth pursuit, saccades, and manual responses** *Richard Krauzlis, Samuel Nummela*

36.537 **Peripheral motion enhances target selection during smooth pursuit** *Zhenlan Jin, Scott Watamanuik, Adam Reeves, Stephen Heinen*

36.538 **Accuracy and precision of tracking eye movements as a function of age** *Tom CA Freeman, Andrew J Kolarik, Tom H Margrain*

36.539 **Sensitivity to retinal and extra-retinal motion signals as a function of age** *Emer O'Connor, Tom C.A. Freeman, Tom H. Margrain*

36.540 **Simultaneously adapting retinal motion and smooth pursuit eye movement in orthogonal directions** *J. Rhys Davies, Tom C.A. Freeman*

36.541 **Influence of perspective and disparity on vergence smooth pursuit** *Dagmar Wismeijer, Tomas Knapen, Raymond van Ee, Casper Erkelens*

36.542 **Anticipatory Pursuit Is Influenced by a Concurrent Duration Reproduction Task** *Jeremy Badler, Philippe Lefèvre, Marcus Missal*

36.543 **Fixations Gain Reward by Reducing Model Uncertainties** *Dana Ballard, Mary Hayhoe*

Monday Sessions

Monday, May 12, 8:30 - 10:00 am
Talk Session, Vista Ballroom

Global and Biological Motion

Moderator: David Whitney

8:30 am

41.11 **Brain activity evoked by motion direction changes and by global motion coherence shows different spatial distributions** *Oliver Braddick, John Wattam-Bell, Dee Birtles, Jennifer Loesch, Laura Loesch, Kathryn Frazier, Janette Atkinson*

8:45 am

41.12 **Biological motion is not identifiable by motion alone** *Hongjing Lu*

9:00 am

41.13 **fMRI reveals distinct processing of form and motion features in biological motion displays** *Jan Jastorff, Guy A. Orban*

9:15 am

41.14 **Neural bases of visual motion perception deficits in autism** *Kami Koldewyn, David Whitney, Susan Rivera*

9:30 am

41.15 **Phantom flow parsing: Global visual compensation for observer movement-entrained retinal motion** *Paul Warren, Simon Rushton*

9:45 am

41.16 **Human-Assisted Motion Annotation for Real-World Videos** *Ce Liu, Edward Adelson, William Freeman*

Monday, May 12, 8:30 - 10:00 am
Talk Session, Royal Palm Ballroom 4-5

Attention to Objects and Scenes

Moderator: Marlene Behrmann

8:30 am

41.21 **Object-Based Attention: Beyond Gestalt Principles** *Xingshan Li, Gordon D. Logan*

8:45 am

41.22 **A Model of Top-Down Control of Attention during Visual Search in Real-World Scenes** *Alex Hwang, Marc Pomplun*

9:00 am

41.23 **Natural Image RSVP task performance is predicted by measurements of bottom-up Bayesian Surprise exhibited by image sequences** *Terrell Mundhenk, Wolfgang Einhäuser, Laurent Itti*

9:15 am

41.24 **A new masking technique for natural scenes reveals the saliency of an image** *Claudia Wilimzig, Rufin VanRullen, Christof Koch*

9:30 am

41.25 **The scope of social attention deficits in autism: Prioritized orienting to people and animals in static natural scenes** *Joshua J. New, Robert T. Schultz, Julie Wolf, Jeff L. Niehaus, Ami Klin, Brian J. Scholl*

9:45 am

41.26 **Selectivity for faces as exogenous attentional cues** *James H. Elder, Dahlia Y. Balaban, Aryan Kamyab, Laurie Wilcox, Yuqian Hou*

Monday, May 12, 10:30 am - 12:15 pm
Talk Session, Vista Ballroom

Spatial Vision: Natural Scene Statistics

Moderator: Melanie Palomares

10:30 am

42.11 **The parvo and magno-cellular systems encode natural image statistics parameters** *H.Steven Scholte, Sennay Ghebreab, Arnold Smeulders, Victor Lamme*

10:45 am

42.12 **The temporal properties of contrast adaptation are matched to the statistics of illumination change in the natural world** *Roland Baddeley, David Attewell*

11:00 am

42.13 **Sensitivity to Spatial Distortion in Natural Scenes** *Peter Bex*

11:15 am

42.14 **The attentional blink does not disrupt computation of the mean size** *Sung Jun Joo, Sang Chul Chong*

11:30 am

42.15 **Visual evoked potentials for dynamic Glass pattern perception in 4-5 month old infants** *Melanie Palomares, Mark Pettet, Vladimir Vildavski, Chuan Hou, Anthony Norcia*

11:45 am

42.16 **A visual sense of number** *David Burr, John Ross*

12:00 pm

42.17 **The visual system removes sensory noise from the representation of a texture** *Michael Morgan, Charles Chubb, Joshua Solomon*

Monday, May 12, 10:30 am - 12:15 pm
Talk Session, Royal Palm Ballroom 4-5

Visual Memory

Moderator: Shaul Hochstein

10:30 am

42.21 **Memory Mechanisms for Familiarity Recognition and Identification** *Shaul Hochstein, Volodya Yakovlev, Sandro Romani, Daniel Amit*

10:45 am

42.22 **Remembering Thousands of Objects with High Fidelity** *Talia Konkle, Tim Brady, George Alvarez, Aude Oliva*

11:00 am

42.23 **Neural evidence of statistical learning: Incidental detection and anticipation of regularities** *Nicholas B. Turk-Browne, Marcia K. Johnson, Marvin M. Chun, Brian J. Scholl*

11:15 am

42.24 **The neural basis of implicit short-term memory: TMS investigations of visual priming** *Gianluca Campana, Clara Casco*

11:30 am

42.25 **Increases in gamma-band activity do not predict spatial working memory retention in macaque monkeys** *Geoffrey Woodman, Min-Suk Kang, Rebecca St. Clair, Jeffrey Schall*

11:45 am

42.26 **Information limits visual short term memory** *Dana Najjar, Edward Vul, George Alvarez*

12:00 pm

42.27 **Popping in and out of existence: The effect of gradual and abrupt occlusion on object localization** *J. Stephen Higgins, Daniel Simons, Ranxiao Wang*

Monday, May 12, 8:30 am - 12:30 pm
Poster Session, Royal Palm Ballroom 1-3

Faces: Emotion

43.301 **TMS disrupts the perception and embodiment of facial expressions** *David Pitcher, Lucia Garrido, Vincent Walsh, Brad Duchaine*

43.302 **Emotion suppresses repetition suppression of faces** *Atsunobu Suzuki, Joshua Goh, Brad Sutton, Andy Hebrank, Lucas Jenkins, Blair Flicker, Denise Park*

43.303 **Identification of expressive faces in the attentional blink** *Julia Gomez-Cuerva, Margaret C. Jackson, Jane E. Raymond*

43.304 **Contrasting target visibility and visual awareness in unconscious emotional body perception** *Bernard Stienen, Beatrice De Gelder*

43.305 **Implicit and explicit processing of facial expression in childhood, adolescence and adulthood: An ERP study** *Romina Palermo, Carmen Atkinson, Megan Willis, Peter De Lissa, Christopher Sewell, Genevieve McArthur*

43.306 **Surprised but not Scared: Similarities and Differences in the Perceptual Structure of Facial Expressions of 7-Year-Olds and Adults** *Xiaoqing Gao, Daphne Maurer*

43.307 **Lost in Translation: Culturally Tuned Eye Movements Impair Decoding of Facial Expression Signals** *Rachael E. Jack, Caroline Blais, Anne-Sarah Caldara, Christoph Scheepers, Roberto Caldara*

43.308 **The use of Spatio-temporal Information in decoding facial expression of emotions** *Sylvain Roy, Cynthia Roy, Zakia Hammal, Daniel Fiset, Caroline Blais, Boutheina Jemel, Frédéric Gosselin*

43.309 **Behavioral and fMRI studies of identity and expression perception in acquired prosopagnosia** *Christopher J Fox, Giuseppe Iaria, Bradley C Duchaine, Jason J S Barton*

43.310 **Strategy for visual scanning of faces varies with the degree of Asperger Syndrome traits** *Kathleen W. Smith, Laurence R. Harris, Jennifer K.E. Steeves*

43.311 **Recognizing static and dynamic facial expressions of pain : Gaze-tracking and Bubbles experiments** *Cynthia Roy, Sylvain Roy, Daniel Fiset, Zakia Hammal, Caroline Blais, Pierre Rainville, Frédéric Gosselin*

43.312 **Fearing Rembrandt's Male Portraits (Hess Revisited)** *James Schirillo, Ryan Powell*

43.313 **Adaptation to Facial Expressions** *Igor Juricevic, Michael Webster*

43.314 **Emotion Perception in Neutral Expressions** *Aleix Martinez, Don Neth*

43.315 **The effect of stimulus duration on the processing of facial expressions of emotion – an EEG study** *Marie Smith*

43.316 **When Anger Spreads to One's Neighbors: Within-Hemifield Averaging of Facial Expressions** *Marcia Grabowecky, Timothy D. Sweeny, Ken A. Paller, Satoru Suzuki*

43.317 **Evidence for adaptive design in human gaze preference** *Claire A Conway, Benedict C Jones, Lisa M DeBruine, Anthony C Little*

Perceptual Organization: 2D Shape

43.318 **Shape classification based on natural shape statistics** *John Wilder, Jacob Feldman, Manish Singh*

43.319 **Shape skeletons and shape similarity** *Erica Briscoe, Manish Singh, Jacob Feldman*

43.320 **Skeleton-based segmentation of shapes into parts** *Manish Singh, Jacob Feldman*

43.321 **Convexities Move, Concavities Follow** *Elan Barenholtz*

43.322 **Globally inconsistent figure/ground relations induced by negative parts** *Sung-Ho Kim, Jacob Feldman*

43.323 **Detection of globally processed radial frequency contours: Narrow-band shape channels integrate luminance and contrast cues** *Jason Bell, David Badcock*

43.324 **Adaptation to Radial Frequency Patterns in the Lateral Occipital Cortex** *Lisa Betts, Stephane Rainville, Hugh Wilson*

43.325 **Interplay between pattern density and global form in Glass patterns** *Ilmari Kurki, Jussi Saarinen*

43.326 **Common elements of perceptual organization: illusory contours and dimensional consistency** *Jennifer Bittner, Michael Wenger, Rebecca Von Der Heide, Brianna Sullivan*

43.327 **Perceptual filling-in on a natural blind spot influences pupillary light reflex** *Kentaro Miyamoto, Ikuya Murakami*

43.328 **Does the luminance condition for test figures change the illusion?** *Seiichiro Naito, Masafumi Kaite*

43.329 **Center of Mass Estimation in Three-Body Displays The Influence of Median Length and Orientation** *Jay Friedenberg, Bruce Liby, Juan Flores*

43.330 **fMRI used to distinguish conjoint and independent representation of perceptual axes** *Geoffrey Aguirre, Daniel Drucker*

43.331 **Exploring Shape using Goodness-of-Fit Measures** *Stephen Palmer, Stefano Guidi*

43.332 **Intrinsic Orientation and Learning Viewpoint in Shape Recognition** *Weimin Mou, Xiaoou Li, Timothy McNamara*

43.333 **Prior experience affects amodal completion in bonobos** *Yasuo Nagasaka, Daniel Brooks, Edward Wasserman*

43.334 **Artists Drawing Angles: An Expertise Approach** *Linda Carson, Fran Allard*

Scene Perception 2

43.335 **Comparison of Gist Models in Rapid Scene Categorization Tasks** *Christian Siagian, Laurent Itti*

43.336 **Scene understanding using attentional control of gist and texture information** *Tsung-Ren Huang, Stephen Grossberg*

43.337 **Spatiotemporal influence of colour on scene gist perception** *Aaron Johnson, Jessica Fan Zhang*

43.338 **The Roles of Central versus Peripheral Visual Information in Recognizing Scene Gist** *Adam Larson, Lester Loschky, Elise Matz, Scott Smerchek, Pheasant Weber, Lindsey Berger*

43.339 **The Superordinate Natural/Man-made Distinction is Perceived Before Basic Level Distinctions in Scene Gist Recognition** *Lester Loschky, Adam Larson, Scott Smerchek, Shawn Finan*

43.340 **The Opportunistic Use of Reference Frames for Rotating Scene Stimuli** *Amy Shelton, Yolanda Lau, Jeffrey Zacks, Byung Chul Yoon*

43.341 **Multiple fixations do not enhance spatial memory for scene layout** *Kristin Michod, Christopher Dickinson, Helene Intraub*

43.342 **Spatial biases in scanning and remembering scenes** *Christopher Dickinson, Helene Intraub*

43.343 **Scene perception and memory revealed by eye movements and ROC analysis: Does a cultural difference truly exist?** *Kris Chang, Caren Rotello, Xingshan Li, Keith Rayner*

43.344 **The perceived trajectory of objects crossing the perceptual horizon in a 3-D scene** *Kerem Ozkan, Myron Braunstein*

43.345 **A Multinomial Processing Tree Model of Change Blindness and Change Detection** *Emmanuelle Boloix*

Monday, May 12, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 6-8

3D Space Perception

43.401 **Differences in feature vs object binding across depth: Evidence from grapheme-color synesthesia** *Bryan Alvarez, Lynn Robertson*

43.402 **Visual performance fields are retinotopic** *Jennifer Corbett, Marisa Carrasco*

43.403 **Importance of proprioceptive and vestibular information for visual space anisotropy** *Oliver Toskovic*

43.404 **Exploring the Time Course of Egocentric Distance Perception with Visual Masking of a Real-World Environment** *Daniel A. Gajewski, John W. Philbeck, David F. Chichka, Steven F. Pothier*

43.405 **Exploring the effects of self-representation on spatial perception in immersive virtual environments** *Victoria Interrante, Brian Ries, Michael Kaeding, Lee Anderson*

43.406 **The role if immersion in three-dimensional spatial processing** *Maria Kozhevnikov, Jodie Royan, Andrey Gorbunov*

43.407 **Angle of declination manipulations and their effects on distance judgments in virtual environments** *Scott A. Kuhl, William B. Thompson, Sarah H. Creem-Regehr*

43.408 **Estimation of Distance on Flat and Uphill Terrains Using Visual Matching and Blind Walking Task** *Huai-Yong Zhao, Peng Wang, Ai-Shi Jiang, Ling-Dan Wu, Hong-Jin Sun*

43.409 **Comparison of rope-pulling and blindwalking as measures of perceived egocentric distance** *Adam J. Woods, John Philbeck*

43.410 **Visually directed walking to targets viewed with severely degraded vision is surprisingly accurate** *Margaret R. Tarampi, Sarah H. Creem-Regehr, William B. Thompson*

43.411 **Demand characteristics, not effort: The role of backpacks in judging distance** *Robert Russell, Frank H. Durgin*

43.412 **Changing spaces: Body size influences the perception of aperture width** *Jeanine Stefanucci, Michael Geuss*

43.413 **Studying the relationship between emotion and height perception in naturalistic settings** *Erika Siegel, Michael Geuss, Jeanine Stefanucci*

43.414 **What sculpted depictions of 3-D objects reveal about visual and haptic mental representations** *Eric Egan, Flip Phillips, Farley Norman*

43.415 **Metric Shape Perception Requires A 45° Continuous Perspective Change** *Young Lim Lee, Mats Lind, Geoffrey Bingham*

43.416 **Playing Air Guitar Eliminates Effect of Ability on Perceived Distance** *Jessica Witt, Dennis Proffitt*

Attention: Crossmodal and Cognitive Effects

43.417 **Social and emotional biases increase with monetary incentives through attentional inhibition** *Su Keun Jeong, Min-Shik Kim*

43.418 **The influence of odor on perception of emotional stimuli** *Luiz Henrique Canto-Pereira, Adriana Azevedo, Ronald Ranvaud*

43.419 **How's My Hat? Effect of Emotional Expression** *Leslie A. Valdes, Rachel C. Patterson, Lisa Shelton, Hannah Spanier, Namgyal Tuladhar, Brenda N. Buswell*

43.420 **Do the hands shift the eyes?** *Mazyar Fallah, Jessica Krayz, Heather Jordan*

43.421 **Endogenous selective attention to opposite-moving spectral components influences aftereffects in vision and audition** *Anshul Jain, Thomas Papathomas, Sharon Sally*

43.422 **A Comparison of Spatial Attention and Representation in Vision and Audition** *Yamaya Sosa, Stephanie Simon-Dack, Wolfgang Teder-Salejarvi, Mark McCourt*

Attention: Selection and Modulation 2

43.423 **Neural Dissociation between Visual Awareness and Spatial Attention** *Valentin Wyart, Catherine Tallon-Baudry*

43.424 **Misdirecting people's attention: What can misdirection tell us about attention and awareness?** *Gustav Kuhn*

43.425 **It's about time: why right spatial neglect is mild** *Andrea Schneider, Marc Hurwitz, Colleen Merrifield, James Danckert*

43.426 **The effects of stimulus-salience in object-substitution masking** *Wieske van Zoest, Clayton Hickey, Vince Di Lollo*

43.427 **Asymmetry in object substitution masking occurs relative to the direction of spatial attention shift** *Nobuyuki Hirose, Naoyuki Osaka*

43.428 **Visual attention guided video compression** *Zhicheng Li, Laurent Itti*

43.429 **Attentional Synchrony in Static and Dynamic Scenes** *Tim Smith, John Henderson*

43.430 **Visual Search in Children with ADHD: The Influence of Feedback on Selective Attention** *Ester Reijnen, Klaus Opwis*

43.431 **The effect of practice on top-down guidance in visual search for two types of complex target: Evidence from eye-movements** *Tamaryn Menneer, Xingshan Li, Michael Stroud, Colleen Butler, Kyle Cave, Donnelly Nick*

43.432 **Finding top-down guidance in singleton search: an exploration of critical conditions** *Carly Leonard, Jeff Moher, Howard Egeth*

43.433 **Collinear Alignment Modulates Competitive Interactions in Human Extrastriate Cortex** *Stephanie McMains, Sabine Kastner*

43.434 **The various attention deficits in adult-ADHD and their relation to driving behavior** *Lilach Shalev, Carmel Mevorach, Yehoshua Tsal*

43.435 **More than the sum of the parts: Further evidence for an interaction principle of attention** *Bettina Olk*

43.436 **(More) Evidence that nonpredictive arrows elicit reflexive orienting: An ERP study** *Jelena Ristic, Bailey M. Bonura, Barry Giesbrecht*

43.437 **A surprisingly stimulus-specific effect of self-awareness on perception of mirrored and un-mirrored self-faces** *Eric Smith, Marcia Grabowecky, Satoru Suzuki*

43.438 **Effect of Perceptual Load on Response Control** *Daryl Wilson, David Gilbert*

43.439 **Holding up the Eyes, not the Hands: the effect of remote distractors on reaction times** *Antimo Buonocore, Robert McIntosh*

43.440 **The Perceptual Fate of Onsets: Abruptly Appearing Objects Are Perceived Better** *Joshua Cosman, Shaun Vecera*

43.441 **The Effect of Target Detection on Visual Long-Term Memory for Background Scenes** *Khena Swallow, Yuhong V. Jiang*

Monday, May 12, 8:30 am - 12:30 pm Poster Session, Orchid Ballroom

Binocular Rivalry and Integration 2

43.501 **Slow changes in neural state mediate percept switches in intermittent binocular rivalry** *Jan Brascamp, Joel Pearson, Randolph Blake, Albert van den Berg*

43.502 **A novel technique for generating perceptual waves during binocular rivalry and binocular fusion** *Min-Suk Kang, Randolph Blake*

43.503 **Factors in the measurement of interocular inhibition fields** *David F. Nichols, Hugh R. Wilson*

43.504 **Binocular integration and normalization in primary visual cortex: an fMRI study** *Farshad Moradi, David Heeger*

43.505 **A causal role for right parietal cortex in binocular rivalry demonstrated with TMS** *David Carmel, Vincent Walsh, Nilli Lavie, Geraint Rees*

43.506 **Enhanced depth perception following high-frequency repetitive transcranial magnetic stimulation of human area V2/V3** *Michael Waterston, Christopher Pack*

43.507 **Magnocellular and parvocellular pathways differentially modulate conscious perception with eccentricity: Evidence from Binocular Rivalry** *Felipe Aedo-Jury, Delphine Pins*

43.508 **Neural Correlates of Motion-Induced Blindness in the Human Brain** *Marieke Scholvinck, Geraint Rees*

43.509 **Early neural interactions can explain perceptual bistability modifications of stimulus timing, perceptual history, cross-modal influence and attentional control** *Raymond van Ee*

43.510 **Sound enhances processing of emotional words under invisible conditions** *Yung-Hao Yang, Su-Ling Yeh*

43.511 **Meridional asymmetry of collinear interactions in the normal visual cortex** *Oren Yehezkel, Uri Polat*

43.512 **The stimulus conditions for uniocular determination of perceived direction near unpaired regions** *Phillip Marlow, Barbara Gillam*

43.513 **Accommodative and vergence responses to conflicting blur and disparity cues in the developing visual system** *Shrikant Bharadwaj, Rowan Candy*

43.514 **Channel-specific, monocular adaptation to dynamic Mondrian patterns revealed during binocular rivalry** *Sang Wook Hong, Randolph Blake*

43.515 **Is Motion-induced blindness a perceptual scotoma?** *Li-Chuan Hsu, Su-Ling Yeh*

43.516 **The Effects of Motion on Binocular Rivalry between Simple and Complex Images** *Laila Hugrass, David Crewther, David Alais*

Receptive Fields and Maps

43.517 **Structural Theorems for Simple Cell Receptive Fields** *Davis Cope, Barbara Blakeslee, Mark McCourt*

43.518 **The effects of spatial attention and population receptive field size estimation on fMRI topographic mapping signals** *David Bressler, Michael Silver*

43.519 **7T Spin Echo Sequences Provide Improved Spatial Accuracy in BOLD fMRI Experiments** *Jennifer F. Schumacher, Cheryl A. Olman*

43.520 **Retinotopic mapping of the human visual cortex at 7 Tesla magnetic field strength** *Michael B Hoffmann, Martin Kanowski, Oliver Speck*

43.521 **A new method for determining neuron receptive field reference-frames** *Gerald P. Keith, Joseph F.X. DeSouza, Xiaogang Yan, Hongying Wang, J. Douglas Crawford*

43.522 **V1 lesion projection zone signals in a subject with tunnel vision** *Yoichiro Masuda, Serge O. Dumoulin, Satoshi Nakadomari, Brian A. Wandell*

43.523 **Response of the human LGN to different temporal frequencies for achromatic, L/M opponent and S-cone opponent stimuli measured with high field fMRI** *Kathy T. Mullen, Benjamin Thompson, Robert F. Hess*

43.524 **Spatiotemporal Properties of LP-Pulvinar Visual Receptive Fields** *Christian Casanova, Marilyse Piché, Brian Ouellette*

43.525 **A simple model of motion integration in primate visual area MT** *James M.G. Tsui, Christopher C. Pack*

43.526 **Not so fast there: A re-examination of the pattern versus component classification system used to distinguish Middle Temporal (MT/V5) neurons** *John A. Perrone, Richard J. Krauzlis*

43.527 **Application of reverse correlation to the study of visual and extraretinal signals in the macaque superior colliculus** *Christopher Pack, Jan Churan, Daniel Guitton*

43.528 **Contribution of spike timing in contrast and motion direction coding by single neurons in macaque area MT** *Adam Sachs, Paul Khayat, Martinez-Trujillo Julio*

43.529 **The dynamics of V1 population response to instantaneous changes in direction of stimulus motion** *Wei Wu, Paul Tiesinga, Thomas Tucker, Julie Heiner, David Fitzpatrick*

43.530 **Choice Probability and Reaction-Time Correlations in Macaque V1** *Chris Palmer, Eyal Seidemann*

Tuesday Sessions

Tuesday, May 13, 8:30 - 10:15 am
Talk Session, Vista Ballroom

Processing in Time and Space

Moderator: Concetta Morrone

8:30 am

51.11 **A New Temporal Illusion Occurring Early in the Visual System** *Christopher R. L. Cantor, Clifton M. Schor*

8:45 am

51.12 **Dynamics of Non-retinotopic Form Perception Revealed by a Masking Paradigm** *Haluk Ogmen, Michael Herzog, Murat Aydin*

9:00 am

51.13 **Clocking Saccadic Remapping** *Amelia Hunt, Patrick Cavanagh*

9:15 am

51.14 **Spatiotopic selectivity for location of events in space and time** *Maria Concetta Morrone, Paola Binda, David Charles Burr*

9:30 am

51.15 **Spatial and temporal binding in the human pulvinar** *Robert Ward, Isabel Arend, Robert Rafal*

9:45 am

51.16 **Seeing light vs dark lines: psychophysical performance is based on separate channels, limited by noise and uncertainty** *Mark Georgeson, Stuart Wallis*

10:00

51.17 **Does my butt look big in this? Horizontal stripes, perceived body size and the Oppel-Kundt illusion** *Peter Thompson*

Tuesday, May 13, 8:30 - 10:00 am
Talk Session, Royal Palm Ballroom 4-5

Perceptual Organization 2

Moderator: Joseph Brooks

8:30 am

51.21 **Factors influencing perceived occlusion between amodally completable objects** *Barbara J Gillam, Barton L Anderson, Tatjana Seizova-Cajic*

8:45 am

51.22 **Interaction between local and global border-ownership signals on a closed figure composed of small triangles** *Masayuki Kikuchi, Taku Saito*

9:00 am

51.23 **Figure-Ground Segmentation Can Occur Without Attention** *Ruth Kimchi, Mary A. Peterson*

9:15 am

51.24 **Putting figure-ground organization and perceptual grouping in context** *Joseph Brooks, Jon Driver*

9:30 am

51.25 **Decoding orientation-selective responses to real and illusory contours** *Frank Tong, Yukiyasu Kamitani*

9:45 am

51.26 **Cortical dynamics of figure-ground segmentation: Shine-through** *Gregory Francis*

Tuesday, May 13, 10:30 am - 12:15 pm
Talk Session, Vista Ballroom

Vision for Action

Moderator: William Warren

10:30 am

52.11 **Mirror-like representation of observed actions** *Lior Shmuelof, Uri Hertz, Ehud Zohary*

10:45 am

52.12 **The phantom pulse effect: rapid left-right mirror reversals evoke unusual sensations of phantoms, movements, and paresthesias in the limbs and faces of normals and amputees** *David Peterzell*

11:00 am

52.13 **Are latency differences between slant cues visible in the online control of our movement?** *Christa van Mierlo, Eli Brenner, Stefan Louw, Jeroen Smeets*

11:15 am

52.14 **Development of optimal integration for self-motion and landmark cues in human navigation** *Marko Nardini, Peter Jones, Rachael Bedford, Oliver Braddick*

11:30 am

52.15 **Optic flow recalibrates the direction of walking but not throwing** *Hugo Bruggeman, William Warren, Jr.*

11:45 am

52.16 **Visual and vestibular discrimination of heading azimuth and elevation for upright and side-down observers** *Paul MacNeilage, Dora Angelaki*

12:00 pm

52.17 **A dynamical model of pursuit and evasion in humans** *Jonathan A. Cohen, Michael E. Cinelli, William H. Warren*

Tuesday, May 13, 10:30 am - 12:15 pm
Talk Session, Royal Palm Ballroom 4-5

Object Perception 2

Moderator: Karin James

10:30 am

52.21 **Self-generated rotations of 3D objects during initial learning results in automatic motor cortex recruitment during subsequent visual recognition** *Karin James, Scott Mueller*

10:45 am

52.22 **A speed-dependent inversion effect in dynamic object matching** *Benjamin Balas, Pawan Sinha*

11:00 am

52.23 **Dissociating the effects of viewpoint disparity and image similarity in mental rotation and object recognition** *Olivia Cheung, William Hayward, Isabel Gauthier*

11:15 am

52.24 **Differential Learning Processes for Categorization** *Rubi Hammer, André Brechmann, Frank Ohl, Gil Diesendruck, Daphna Weinshall, Shaul Hochstein*

11:30 am

52.25 **Categorical priming: using continuous flash suppression in an object categorization task** *Jorge Almeida, Bradford Mahon, Ken Nakayama, Alfonso Caramazza*

11:45 am

52.26 **A Bayesian Model of Visual Search and Recognition** *Lior Elazary, Laurent Itti*

12:00 pm

52.27 **Auditory but not visual cues facilitate visual object detection** *Gary Lupyan, Michael Spivey*

Tuesday, May 13, 8:30 am - 12:30 pm
Poster Session, Royal Palm Ballroom 1-3

3D Stereopsis and Motion

53.301 **Contextual disparity variation does not influence distance scaling in a three-dimensional shape judgement task** *Lisa O'Kane, Paul Hibbard*

53.302 **Contextual Bias of Slant Perception in Unreliable Context** *Katinka van der Kooij, Susan te Pas*

53.303 **Context shapes estimation of 3D structure in human visual cortex** *Tim Preston, Zoe Kourtzi, Andrew Welchman*

53.304 **Relationship between the Helmholtz shear of vertical meridians and disparity statistics in natural scenes** *Yang Liu, Alan Bovik, Lawrence Cormack*

53.305 **Comparing perceived affordances to size and distance estimates in a virtual environment** *Sarah H. Creem-Regehr, Benjamin R. Kunz, William B. Thompson*

53.306 **An fully automatic technique for Head Mounted Display calibration** *Stuart Gilson, Andrew Fitzgibbon, Andrew Glennerster*

53.307 **Absolute and relative cues for distance investigated using immersive virtual reality** *Ellen Svarverud, Stuart J Gilson, Andrew Glennerster*

53.308 **A laminar cortical model of stereopsis and 3D surface perception of complex natural scenes** *Yongqiang Cao, Stephen Grossberg, Eugene Zaydens*

53.309 **Depth from motion and/or disparity in natural and simulated environments: Do cues-to-flatness matter?** *Rajesh Shah, Fulvio Domini, Corrado Caudek*

53.310 **Mechanisms of 3D Motion: Integration of disparity and motion cues** *Thaddeus Czuba, Bas Rokers, Lawrence K. Cormack, Alexander C. Huk*

53.311 **Interposition, minimal depth, and depth-from-disparity** *Walter Gerbino, Carlo Fantoni*

53.312 **A new theory of structure-from-motion perception** *Julian Fernandez, Bart Farell*

53.313 **Interactions between eye-movements and prior assumptions for 3-D shape from motion** *Xin Meng, Qasim Zaidi*

53.314 **Cue Integration Outside Central Fixation: A Study of Grasping in Depth** *Hal S. Greenwald, David C. Knill*

53.315 **Depth interval perception: Comparing binocular stereopsis with motion parallax in "action space"** *Andrew LeClair, Frank H. Durgin*

53.316 **Influence of central and peripheral visual field on the postural control when viewing an optic flow stimulus** *Jean-Marie Hanssens, Jean-Claude Piponnier, Jocelyn Faubert*

53.317 **Aging and the perception of slant from optical texture, motion parallax, and binocular disparity** *Charles Crabtree, J. Farley Norman, Ashley Bartholomew, Elizabeth Ferrell*

53.318 **The effects of sex and age upon the perception of 3-D shape from deforming and static boundary contours** *J. Farley Norman, Ashley Bartholomew*

Attention: Interactions with Memory

53.319 **Strategic interactions between visual working memory and perceptual attention as revealed by eye movements** *Nancy Carlisle, Leanne Boucher, Geoffrey Woodman*

53.320 **Correlations between Visual Short-Term Memory and Attentional Capacity Limits** *Katherine Bettencourt, David Somers*

53.321 **Attentional Bias Toward Items in Working Memory: Early but not Reflexive** *Mark W. Becker*

53.322 **Executive working memory load does not interfere with the rapid resumption of an interrupted visual search** *JeeWon Ahn, Alejandro Lleras*

53.323 **The Search for Memory: Visual Short-Term Memory Capacity Predicts Performance During Visual Search Tasks** *Stephen Emrich, Naseem Al-Aidroos, Jay Pratt, Susanne Ferber*

53.324 **An unattended stimulus attribute leaves its mark on short-term visual memory** *Jie Huang, Robert Sekuler*

53.325 **The Role of Visual Working Memory in Object-Based Attentional Selection** *Wah Pheow Tan*

53.326 **Object- and feature-based priming in visual search** *Arni Kristjansson, Arny Ingvarsdottir, Unnur Teitsdottir*

53.327 **The Interaction between Global and Local Scene Features in Contextual Cueing** *Daniel I. Brooks, Ian P. Rasmussen, Andrew Hollingworth*

53.328 **Implicit learning of attentional guidance modulates visual preference** *Hirokazu Ogawa, Katsumi Watanabe*

53.329 **The effect of previously exposed configurations on the affective ratings and the difficulty ratings of target detection** *Yoshihiko Yagi, Tadashi Kikuchi*

53.330 **Search is enhanced with visual abstinence: Delaying initial saccade latency in familiar scenes improves search guidance** *Barbara Hidalgo-Sotelo, Aude Oliva*

53.331 **How many mean sizes can we represent?** *Hee Yeon Im, Sang Chul Chong*

53.332 **Abstract Learning of Attentional Set** *Andrew B. Leber, Jun-ichiro Kawahara*

53.333 **Awareness of Visual Impairment in Mild AD** *Matt Rizzo, Jeffrey D. Dawson, Steve W. Anderson, Ergun Y. Uc, Mijin Jang*

53.334 **How sleep influences our memory for faces** *Bhavin Sheth, Ngan Nguyen, Davit Janvelyan*

Attention: Theoretical and Computational Models

53.335 **The magical number 4 in visual cognition** *George Alvarez, Steven Franconeri*

53.336 **Selective attention and uncertainty** *Edward Vul, Deborah Hanus, Nancy Kanwisher*

53.337 **The role of Fourier phase information in predicting saliency** *Robert Peters, Laurent Itti*

53.338 **The Focus of Expansion Acts as a Cue for Visual Attention** *Masaki Fukuchi, Christof Koch*

53.339 **Binary versus Graded Filters for Selectively Attending to Dots of Different Contrasts** *Stefanie A. Drew, Charles F. Chubb, Tobin Ehrlich, Tim Rubin, George Sperling*

53.340 **Contrast Modulation by Spatial Attention for the Perception of Figure Directions** *Nobuhiko Wagatsuma, Ryohei Shimizu, Ko Sakai*

Tuesday, May 13, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 6-8

Faces: Wholes, Part, Configurations and Features

53.401 **Individuation training but not categorization training leads to configural processing of non-face objects** *Alan Wong, Thomas Palmeri, Isabel Gauthier*

53.402 **Context Influences Holistic Processing of Face and Non-face Objects in the Composite Task** *Jennifer J. Richler, Cindy M. Bukach, Isabel Gauthier*

53.403 **Abnormal eye fixations on personally familiar faces following acquired prosopagnosia reveal a lack of individual holistic face perception** *Jean-Jacques Orban de Xivry, Meike Ramon, Philippe Lefèvre, Bruno Rossion*

53.404 **Personally familiar faces and holistic processing** *Meike Ramon, Bruno Rossion*

53.405 **Using general recognition theory to investigate the Thatcher illusion** *Katherine Cornes, Michael Wenger, Nick Donnelly*

53.406 **The crowding effect and perceptual and decisional holism in the visual processing of faces** *Brianna Sullivan, Michael Wenger, Rebecca Von Der Heide, Jennifer Bittner*

53.407 **Reassessing the architecture of same-different face judgments** *Lacey Perry, Leslie Blaha, James Townsend*

53.408 **Discrimination, bias and focused attention in the composite face effect** *Sohi Ashraf, Alla Sekunova, Jason Barton*

53.409 **The composite face effect is still not correlated with face identification accuracy** *Yaroslav Konar, Patrick J. Bennett, Allison B. Sekuler*

53.410 **Effects of viewing condition and age on the functionality of eye movements for face recognition memory** *Ryan Kealey, Allison B. Sekuler, Pat J. Bennett*

53.411 **Classification images measured in a same/different face discrimination task** *Patrick Bennett, Matt Pachai, Allison Sekuler*

53.412 **The use of the eyes for human face recognition explained through information distribution analysis** *Matthew Peterson, Ian Cox, Miguel Eckstein*

53.413 **Removing individual features from famous faces: The development of a novel test** *Lisa Hill, Mark Scase*

53.414 **Faces in noise** *Carrie Paras, Sarita Rajewale, Christopher Tyler, Michael Webster*

53.415 **Time-Costs for Recognizing Degraded Images** *Tharian Cherian, Valerie Morash, Pawan Sinha*

53.416 **Blurry faces are sometimes recognized better than high-resolution faces** *MiYoung Kwon, Amy Kalia, Gordon Legge*

53.417 **Don't blink, you are being watched: Effects of direct gaze on attentional blink** *Carmela Gottesman*

53.418 **Hemispheric specialization for face processing revealed by use of Thatcherized and feature distorted faces** *Michael Anes, Lindsey Short, Jennifer Storer*

Motion: Biological Motion

53.419 **Perception of Biological Motion Across the Visual Field** *Rick Gurnsey, Marouane Ouhnana, Nikolaus Troje*

53.420 **Neural encoding of walking direction in biological motion: Evidence from direction-specific adaptation and functional neuroimaging** *Yi Jiang, Sheng He*

53.421 **Gait-Specific Adaptation Depends on Body Configuration** *Elizabeth Hussey, James Thompson*

53.422 **The perceived depth affects biological motion perception** *Naoyuki Matsuzaki, Michiteru Kitazaki*

53.423 **Biological motion perception: Walker distance does not matter** *Isabelle Legault, Jocelyn Faubert*

53.424 **Perceptions of an Animated Figure as a Function of Movement Naturalness: No Sign of the Uncanny Valley** *James Thompson, Greg Trafton, Malcolm McCurry, Evan Francis*

53.425 **Critical temporal windows for natural point-light gender discrimination** *Steven Thurman, John Pyles, Nikolaus Troje, Emily Grossman*

53.426 **Action Invariance: An fMRI investigation of biological motion specificity in the STSp** *Nicole L. Jardine, John A. Pyles, Emily D. Grossman*

53.427 **Biological Motion and Social Interaction Activate Distinct Regions of the STS** *John A. Pyles, Emily D. Grossman*

53.428 **Distinctive postural and dynamic features for bodily emotion expression** *Claire L. Roether, Lars Omlor, Martin A. Giese*

53.429 **The local inversion effect in biological motion perception is acceleration-based** *Dorita H. F. Chang, Nikolaus F. Troje*

53.430 **Person identification across actions from biological motion** *Giles Holland, Shilpa Mody, Nikolaus Troje*

53.431 **A right-facing bias in the processing of biological motion?** *Kathryn E. Williamson, Lorna S. Jakobson, Nikolaus F. Troje*

53.432 **Perceptual biases expressed during observation of human movement** *Ava J. Senkfor*

53.433 **Recognizing emotional states from biological motion within noise** *Hanako Ikeda, Katsumi Watanabe*

Tuesday, May 13, 8:30 am - 12:30 pm Poster Session, Orchid Ballroom

Saccadic Eye Movements

53.501 **Saccadic Reaction Times and Speed of Information Processing Development** *Thomas Baker, Scott Adler*

53.502 **Saccadic gain adaptation follows perceived position** *Karl Gegenfurtner, Alexander Schütz, Max Schneider*

53.503 **Optimality of saccadic decisions under risk** *Martin Stritzke, Julia Trommershäuser, Karl R. Gegenfurtner*

53.504 **Saccadic adaptation: reinforcement can drive motor adaptation** *Laurent Madelain, Celine Paeye, Josh Wallman*

53.505 **Adaptation of saccadic eye movements: behavioural evidence for different mechanisms controlling saccade amplitude lengthening and shortening** *Muriel Panouillères, Julien Cotti, Alain Guillaume, Christian Urquizar, Roméo Salemme, Douglas P. Munoz, Denis Pélisson*

53.506 **Adaptation of saccadic eye movements: neurological evidence for different mechanisms controlling the amplitude of reactive and voluntary saccades** *Denis Pélisson, Muriel Panouillères, Nadia Alahyane, Christian Urquizar, Roméo Salemme, Caroline Tilikete*

53.507 **Saccadic gain adaptation can depend on the visual context** *James Herman, Mark Harwood, Josh Wallman*

53.508 **Previous saccades to other locations affect the programming of current antisaccade coordinates, but not those of prosaccades** *Amadeo Rodriguez, Hyung Lee, John Koehn, Wieske van Zoest, Jason Barton*

53.509 **Reactive Saccades Dynamics: Visual Integration and Visual Context** *Peggy Gerardin, Valerie Gaveau, Denis Pelisson, Claude Prablanc*

53.510 **Visuomotor set can suppress the inhibitory influence of distractors on express saccades** *Jay Edelman, Kitty Xu*

53.511 **Luminance And Saccadic Supression On Perisaccadic Spatial Distortions** *Zhi-Lei Zhang, Christopher Cantor, Clifton Schor*

53.512 **Spatio-temporal topography of saccadic suppression** *Jonas Knöll, Jens Beyer, Frank Bremmer*

53.513 **Perisaccadic visual compression shown by target-flash mislocalization may be affected by flash visual persistence interacting with background stimuli** *Jordan Pola*

53.514 **A visual target in the blind hemifield of hemidecorticate patients reduces latency and improves accuracy of antisaccades** *Olga Savina, Andre Bergeron, Daniel Guitton*

53.515 **Cortical Contributions to Saccadic Suppression** *George Chahine, Bart Krekelberg*

53.516 **Objective characterization of square-wave jerks in progressive supranuclear palsy patients and healthy volunteers** *Jorge Otero-Millan, R. John Leigh, Alessandro Serra, Xoana Troncoso, Stephen Macknik, Susana Martinez-Conde*

53.517 **Older adults just can't look away: Age-related changes in saccadic trajectory curvature** *Jay Pratt, Naseem Al-Aidroos, Karen Campbell, Lynn Hasher*

53.518 **Influence of Relative Saccade Direction on Detection of Transsaccadic Natural Scene Transitions** *Shabnam Sadr, Robert S. Allison, Margarita Vinnikov, Dominik Swierad*

53.519 **Fitts's Law and the optimal planning of sequences of saccades** *Chia-Chien Wu, Brian Schnitzer, Eileen Kowler, Zygmunt Pizlo*

53.520 **The Which and the Where of eye movement control** *Filipe Cristino, Roland Baddeley*

Spatial Vision: Mechanisms 2

53.521 **Size and shape-frequency after-effects: same or different mechanism?** *Elena Gheorghiu, Frederick A. A. Kingdom, Emma Witney*

53.522 **An after-effect of perceived length** *Frederick Kingdom, Roger Watt*

53.523 **Asymmetrical Adaptation to Highpass versus Lowpass Filtered Images** *Fuensanta A. Vera-Diaz, Robert B. Goldstein, Eli Peli*

53.524 **Efficient Adaptive Measurement and Classification of Contrast Sensitivity Functions** *Luis Andres Lesmes, Zhong-Lin Lu, Jongsoo Baek, Thomas Albright*

53.525 **Diverse Long Range Configural Judgments Use a Single Map of Object Locations** *Charles Chubb, Charles Wright*

53.526 **Non-Euclidean Visual Traveling Salesman Problem** *Yll Haxhimusa, Zygmunt Pizlo, Joseph Catrambone*

53.527 **Visual sensitivity to achromatic gradients with different luminance profiles** *Luis Garcia-Suarez, Alexa I. Ruppertsberg, Marina Bloj*

53.528 **Psychophysically defined gain control pool and summing circuit bandwidths for orientation selective pathways** *Patrick Hibbeler, Lynn Olzak*

53.529 **Representation of Mean Spatial Frequency** *Kyung Mi Park, Sang Chul Chong*

53.530 **Mega surround suppression: a synergy between target pedestal and surround mask** *Yury Petrov, Olga Meleshkevich*

53.531 **Comparison of pupil responses to the first and second order gratings** *Arash Sahraie, Sian Griffiths, Claire Conway*

53.532 **Time course of motion-induced shifts in perceived position** *Neil Roach, Paul McGraw*

53.533 **Are Shifting, Splitting, and Scaling of Attention Similar Processes?** *Peter Squire, Pamela Greenwood, Raja Parasuraman*

53.534 **Visual Performance and Glare: Spatial properties of visual obscuration** *James Stringham, Peter Smith, Leon McLin*

53.535 **Precorrecting visual objects destined for defocus** *John Yellott*

53.536 **Resolving inconsistencies between parametric estimates of psychometric functions by nonparametric fitting** *Kamila Zychaluk, David H. Foster*

53.537 **The neural correlates of the 3-dot vernier task: visuospatial extrapolation examined within the framework of a duplex model of vision** *Marc Tibber, Anderson Elaine, Geraint Rees, Michael Morgan*

53.538 **Effects of reference frame on the perception of human-body orientation in infancy** *Aki Tsuruhara, So Kanazawa, Masami Yamaguchi*

53.539 **Percept dependent acitivity in the occipitotemporal cortex for Ebbinghaus illusion** *Ansgar Koene, Yu-Chin Huang, Chien-Chung Chen*

Tuesday, May 13, 2:30 - 4:00 pm
Talk Session, Vista Ballroom

Visual Pathways: Receptors to Cortex

Moderator: Adam Reeves

2:30 pm

54.11 **Early scotopic dark adaptation; change in noise alone?** *Adam Reeves, Rebecca Grayhem*

2:45 pm

54.12 **The S-cone luminance input depends on the level of M-cone adaptation** *Caterina Ripamonti, Elizabeth Crowther, Andrew Stockman*

3:00 pm

54.13 **LGN abnormalities in human amblyopes revealed by high-field fMRI** *Robert Hess, Kathy T. Mullen, Benjamin Thompson, Glen Gole*

3:15 pm

54.14 **Identification of optic radiation in-vivo using diffusion tensor imaging and fiber tractography** *Anthony Sherbondy, Robert Dougherty, Brian Wandell*

3:30 pm

54.15 **Topography of responses to colour and luminance in human subcortical visual pathways as revealed by high-resolution fMRI at 7T** *Marcus Grueschow, Jochem Rieger, Jörg Stadler, Claus Tempelmann, Hans-Jochen Heinze, Oliver Speck, John-Dylan Haynes*

3:45 pm

54.16 **Time course of cortical responses to illusory and real lightness changes** *Huseyin Boyaci, Fang Fang, Scott Murray, Gina Albanese, Daniel Kersten*

Tuesday, May 13, 2:30 - 4:00 pm Talk Session, Royal Palm Ballroom 4-5

Face Perception: Emotion and Experience

Moderator: Frederic Gosselin

2:30 pm

54.21 **What does the activity in the amygdala and the insula correlate with in fearful and disgusted faces** *Zakia Hammal, Nao Tsuchiya, Ralph Adolphs, Martin Arguin, Philippe Schyns, Frédéric Gosselin*

2:45 pm

54.22 **Decoding Frequency and Timing of Emotion Perception from Direct Intracranial Recordings in the Human Brain** *Naotsugu Tsuchiya, Hiroto Kawasaki, Matthew Howard, Ralph Adolphs*

3:00 pm

54.23 **Classification Maps: An information-theoretic technique for relating cortical activity to stimulus information in a facial expression categorization task** *Oliver Garrod, Marie L. Smith, Philippe G. Schyns*

3:15 pm

54.24 **The Effect of Homeomorphic Image Transformations on Face Matching Performance** *Danelle A. Wilbraham, James C. Christensen, James T. Todd, Aleix M. Martinez*

3:30 pm

54.25 **Local gender biases in face appearance across the visual field** *Seyed-Reza Afraz, Maryam Vaziri-Pashkam, Patrick Cavanagh*

3:45 pm

54.26 **Perception of Chinese characters in novices' and experts' eyes: Similarities and differences between face and Chinese character recognition** *Janet Hui-wen Hsiao, Garrison Cottrell*

Tuesday, May 13, 4:30 - 6:15 pm Talk Session, Vista Ballroom

Spatial Vision: Crowding and Eccentricity 2

Moderator: Susana Chung

4:30 pm

55.11 **Drastically different percepts of five illusions in foveal and peripheral vision reveal their differences in representing visual phase** *Emily Knight, Arthur Shapiro, Zhong-Lin Lu*

4:45 pm

55.12 **What role does contour integration play in crowding?** *Ramakrishna Chakravarthi, Denis Pelli*

5:00 pm

55.13 **The origin of crowding zones** *Anirvan S. Nandy, Bosco S. Tjan*

5:15 pm

55.14 **Feature Maps for Letters** *Susana Chung, Bosco Tjan, Yiji Lin*

5:30 pm

55.15 **Supercrowding: Weakly masking a target greatly enhances crowding** *Timothy Vickery, Won Mok Shim, Yuhong Jiang, Ramakrishna Chakravarthi, Robert Luedeman*

5:45 pm

55.16 **Nasotemporal asymmetry of acuity and crowding** *Sarah Rosen, Ramakrishna Chakravarthi, Denis G. Pelli*

6:00 pm

55.17 **Reduction of the crowding effect in spatially adjacent but cortically remote visual stimuli** *Tingting Liu, Yi Jiang, Sheng He*

Tuesday, May 13, 4:30 - 6:15 pm Talk Session, Royal Palm Ballroom 4-5

Perceptual Learning 1

Moderator: Zoe Kourtzi

4:30 pm

55.21 **Practice little, gain much: short training enables long-term resistance to perceptual deterioration** *Nitzan Censor, Dov Sagi*

4:45 pm

55.22 **Learning confidence in a visual task** *Simon Barthelmé, Pascal Mamassian*

5:00 pm

55.23 **Neural mechanisms of multisensory perceptual learning** *Robyn Kim, Aaron Seitz, Ladan Shams*

5:15 pm

55.24 **Category and Perceptual Learning in Subjects with Treated Wilson's Disease** *Zhong-Lin Lu, Pengjing Xu, Xiaoping Wang, Barbara Dosher, Jiangning Zhou, Daren Zhang, Yifeng Zhou*

5:30 pm

55.25 **Simultaneous training of two high precision tasks is largely independent even when orientation or position is shared** *Pamela Jeter, Barbara Dosher, Zhong-Lin Lu, Zheng Bi*

5:45 pm

55.26 **Learning against the natural statistics: experience-dependent plasticity for contour detection in the human visual cortex** *D. Samuel Schwarzkopf, Zoe Kourtzi*

6:00 pm

55.27 **Boosting perceptual learning by feedback manipulation** *Kazuhisa Shibata, Shin Ishii, Noriko Yamagishi, Mitsuo Kawato*

Tuesday, May 13, 2:30 - 6:30 pm
Poster Session, Royal Palm Ballroom 1-3

Attention: Costs of Divided Attention

56.301 **Distinguishing serial and parallel models using variations of the simultaneous-sequential paradigm** *Alec Scharff, John Palmer*

56.302 **Attentional Resources and the Parvocellular and Magnocellular Pathways** *Satomi Maeda, Allen Nagy*

56.303 **Cross-Hemifield Attention Benefits for Visual Enumeration** *David Somers, Summer Sheremata*

56.304 **Testing a theory of visual attention** *Liqiang Huang, Hal Pashler, Anne Treisman*

56.305 **Trading off visual acuity? Transient attention increases acuity at cued locations and decreases it at uncued locations** *Barbara Montagna, Franco Pestilli, Marisa Carrasco*

56.306 **Coactivation occurs within objects, not between dimensions** *J. Toby Mordkoff, Rose Halterman*

56.307 **Neural basis of feature cueing in the perception of object contours** *Bobby Stojanoski, Matthias Niemeier*

56.308 **Testing Lavie's (1995) perceptual load theory** *Michael Wenger, Daniel Fitousi*

56.309 **Effects of selective attention on the chromatic VEP: Task-relevant stimuli** *Jennifer Highsmith, Chad Duncan, Sean O'Neil, Eric Roth, Michael Crognale*

Attention: Neural Mechanisms

56.310 **The effect of a top-down cue on spread attention in the macaque** *Fabrice Arcizet, James Bisley*

56.311 **Dynamics of the priority map in LIP during visual search** *Koorosh Mirpour, Fabrice Arcizet, James Bisley*

56.312 **Saliency-based guidance of gaze in monkeys with unilateral lesion of primary visual cortex** *Laurent Itti, Masatoshi Yoshida, David Berg, Takuro Ikeda, Rikako Kato, Kana Takaura, Tadashi Isa*

56.313 **Perceptual load-induced selection as a consequence of spatial interactions in visual cortex** *Diane Beck, Ana Torralbo*

56.314 **Attention improves decoding of stimulus orientation in early visual areas** *Janneke Jehee, Devin Brady, Frank Tong*

56.315 **Contrast-specific neural responses underlying the perceptual bias** *Matthias Niemeier, Ada Le, Boge Stojanoski*

56.316 **Estimating the shape of the feature-based attentional gain function** *Miranda Scolari, John Serences*

56.317 **Strong exogenous attraction to attention by unique eye of origin --- evidence for a bottom-up saliency map in the primary visual cortex** *Li Zhaoping*

56.318 **Do gamma-band oscillations bind features when attention is focused on multiple-feature objects during visual search?** *Jason T. Arita, Geoffrey F. Woodman*

56.319 **Retinotopically independent processing of saliency signals in the near-absence of attention** *Carsten Bogler, John-Dylan Haynes*

56.320 **N200 latency predicts behaviorally measured attentional shift time** *Hinze Hogendoorn, Thomas Carlson, Titia Gebuis, Frans Verstraten*

56.321 **Phase-encoded attention tasks reveal topographic maps in posterior parahippocampal cortex** *Michael Arcaro, Stephanie McMains, Sabine Kastner*

56.322 **Selective lateralization of steady state visual evoked potentials at the second harmonic** *Yee Joon Kim, Marcia Grabowecky, Ken A. Paller, Satoru Suzuki*

56.323 **MEG responses in the human brain during the selection of visual targets** *Therese Lennert, Pierre Jolicoeur, Douglas Cheyne, Julio C. Martinez-Trujillo*

56.324 **Pre-stimulus activity predicts subsequent target detection in meta-contrast masking** *Kyle Mathewson, Gabriele Gratton, Monica Fabiani, Diane Beck, Tony Ro*

56.325 **Decoding cognitive control in the parietal cortex** *Yu-Chin Chiu, Michael Esterman, Steven Yantis*

56.326 **Neglected Sight: Preserved Visual Functions Within A Neglected Hemifield** *Stephen Lomber, Erin Woller, Amee Hall, Bertram Payne*

Perceptual Organization: Grouping and Segmentation

56.327 **Context effects in figure-ground perception: The role of biased competition, suppression and long-range connections** *Elizabeth Salvagio, Andrew J. Mojica, Mary A. Peterson*

56.328 **Ventral extra-striate visual regions, feedback and texture perception** *Harriet Allen, Glyn Humphreys, Jess Colin*

56.329 **Perception of illusory transparent surface by young infants** *Yumiko Otsuka, Yuka Yamazaki, Yukuo Konishi, So Kanazawa, Masami Yamaguchi, Branka Spehar*

56.330 **V1 BOLD response to image regions defined by 1st and 2nd order luminance contrast** *Serena Thompson, Cheryl Olman, Daniel Kersten*

56.331 **Perceptual filling-in of an artificial scotoma shows retinotopic specificity in human visual cortex** *Rimona Weil, Geraint Rees*

56.332 **Influence of medial axis structure on the discrimination of texture-defined shapes** *Sarah Harrison, Jacob Feldman*

56.333 **Edge Alignment Effects for Gradient Cuts in Figure-Ground Organization** *Tandra Ghose, Stephen Palmer*

56.334 **Testing for Robustness in Visual Localization of Dot Clusters Without Part Structure** *Mordechai Z. Juni, Manish Singh, Laurence T. Maloney*

56.335 **Redundancy enhances the integration of symmetry information** *Matthias Treder, Peter van der Helm*

56.336 **Perceptual organization in Autism and Asperger Syndrome** *Rolf Nelson*

56.337 **Would letters forming a word survive motion-induced blindness?** *Dina Devyatko, Maria Falikman*

56.338 **Similarity grouping is feature selection** *Steven Franconeri, Doug Bemis*

56.339 **An Objective Measure of the Relative Strength of Perceptual Grouping Cues Using Object-Based Attention** *Adam S. Greenberg, Steven Yantis*

56.340 **State-Dependent Dynamic Grouping and the Perception of Motion** *Howard Hock, David Nichols*

56.341 **Perceptual grouping in a spiking laminar cortical model** *Jasmin Leveille, Stephen Grossberg, Ennio Mingolla, Massimiliano Versace*

56.342 **Perceptual Structure Facilitates Spatial Filtering** *Elisabeth Hein, Cathleen M. Moore, John Palmer*

Tuesday, May 13, 2:30 - 6:30 pm
Poster Session, Royal Palm Ballroom 6-8

Motion: Spatial Interactions and Aftereffects

56.401 **The effects of aging on the bandwidths of directionally-selective mechanisms** *Lia E. Tsotsos, Allison B. Sekuler, Patrick J. Bennett*

56.402 **The Effect of Retinal Eccentricity on the Discrimination Of Global Motion Direction** *Jeffrey D. Bower, Bian Zheng, Rui Ni, George J. Andersen*

56.403 **Local and global inhibitory influences associated with large-field stimuli** *B.M. Sheliga, E.J. FitzGibbon, F.A. Miles*

56.404 **Judgment of absolute direction in natural scenes** *Steven Dakin, Deborah Apthorp, David Alais*

56.405 **Seeing multiple global directions: A maximum capacity limit of three** *John Greenwood, Mark Edwards*

56.406 **Access to retinal image movement during pursuit eye movement is only direct at high motion coherence** *Rebecca Champion, Tom Freeman*

56.407 **Diminished center-surround inhibition in patients with a history of depression** *Julie Golomb, Barbara Ruf, Jenika Beck, Aybala Saricicek, Jian Hu, Marvin Chun, Zubin Bhagwagar*

56.408 **A model of V1-to-MT connectivity accounts for motion perception anisotropies in the human visual system** *Ariel Rokem, Shradha Sanghvi, Michael Silver*

56.409 **Static and flicker MAE for global motion** *Satoshi Shioiri, Kazumichi Matsumiya, Hayato Tamura*

56.410 **Motion aftereffect and motion fading: Same underlying mechanisms?** *Michael von Grünau, Paraskevi Engarhos, Zorina Bacchus*

56.411 **Adaptation precedes inhibition for motion direction interactions** *William Curran, Colin Clifford, Christopher Benton*

56.412 **Visual Velocity Aftereffects in Radial Flow: Inherited and Unique Features** *Marta Iordanova-Maximov, Michael von Grunau*

56.413 **System Dynamics Modeling of the Optic Flow Motion Aftereffect** *Robert Patterson, Jason Rogers, Alan Boydstun, Lisa Tripp, Andreas Stefik*

56.414 **The involvement of local motion adaptation in global motion aftereffect** *Yutaka NAKAJIMA, Takao SATO*

56.415 **Making sense of motion adaptation** *Sergei Gepshtein, Ivan Tyukin, Thomas Albright*

Perception and Action: New Issues

56.416 **Neural mechanisms underlying grapheme-colour synesthesia** *Tanja Nijboer, Titia Gebuis, Sarah Plukaard, Edward de Haan, Maarten van der Smagt*

56.417 **Duration estimation of one's own reactive and proactive motor responses** *Andrei Gorea, Pascal Mamassian, Jean-Claude Kaing*

56.418 **Implicit measurement of uncertainty during classification of ambiguous photographs** *Bharathi Jagadeesh, Yan Liu, Nicolas Brunet*

56.419 **Motor Simulation & the Effects of Energetic & Emotional Costs of Depicted Actions in Picture Perception** *William P. Seeley, Jes Waughtel*

56.420 **The effect of biking effort on perceived distance and slant** *Elyssa Twedt, Sally Linkenauger, Tom Banton, Dennis Proffitt*

56.421 **High-precision capture of perceived velocity during passive translations** *Joshua Siegle, Jennifer Campos, Betty Mohler, Jack Loomis, Heinrich Buelthoff*

56.422 **Basketball Free Throw Accuracy Unaffected by Projected Background Displays Showing Motion or Emotion** *Jeffrey Stone, Igor Dolgov, Flavio DaSilva, Michael McBeath*

56.423 **Spatiotemporal statistics of motion through natural environments** *Tal Tversky, Wilson Geisler*

56.424 **Frequency-phase analysis of postural sway induced by visual motion and galvanic vestibular stimulation** *Michiteru Kitazaki, Takuya Kimura*

56.425 **Estimating Absolute Distances with Blurred Vision** *Amy A. Kalia, Paul R. Schrater, Gordon E. Legge, Christopher S. Kallie*

56.426 **A dissociation between haptic and visual distortion of perceived length** *Alice Coakley, Uta Wolfe*

56.427 **Virtual limbs and body space: The effects of the rubber hand illusion** *Fay Short, Robert Ward*

56.428 **HAL: Human Activity language** *Yiannis Aloimonos*

56.429 **Prestidigitation: Easier to Fool the Eye than the Hand** *Jennifer Anderson, Michael Levine, J. Jason McAnany*

56.430 **The French Drop Sleight: Deceptive Biological Motion** *Michael Natter, Flip Phillips*

56.431 **Moving thought: Directed movement guides insight in problem solving** *Laura Thomas, Alejandro Lleras*

Tuesday, May 13, 2:30 - 6:30 pm
Poster Session, Orchid Ballroom

Multisensory Processing: High Level

56.501 **The Neural Representation of Dynamic Real-World Auditory/Visual Events** *Jean Vettel, Julia Green, Laurie Heller, Michael Tarr*

56.502 **Cross-modal Language Processing in the Visual Cortex of the Congenitally Blind** *Sashank Prasad, Amy Thomas, Geoffrey Aguirre*

56.503 **Auditory recognition in dyslexics improves with visual and motor-visual practice** *Gadi Geiger, Carmen Cattaneo, Maria Luisa Lorusso, Raffaella Galli, Andrea Facoetti, Uberto Pozzoli, Massimo Molteni*

56.504 **Characteristic sounds facilitate vigilance when targets are rare in visual search** *Lucica Iordanescu, Marcia Grabowecky, Satoru Suzuki*

56.505 **Plasticity of Crossmodal Spatiotemporal Effects in a Visual Search Task** *Melissa Batson, Takeo Watanabe*

56.506 **Videogame players demonstrate enhanced multisensory abilities** *Stephen Mitroff, Kerry Jordan*

56.507 **The brain integrates visual and haptic information from different spatial locations when using a tool** *Chie Takahashi, Jörn Diedrichsen, Simon Watt*

56.508 **Enhanced detection of visual stimuli projected on a tool** *Kai-Ling Kao, Melvyn A. Goodale*

56.509 **Left/right asymmetries in the contribution of body orientation to the perceptual upright** *Heather Jenkin, Michael Barnett-Cowan, Richard Dyde, Jeff Sanderson, Michael Jenkin, Laurence Harris*

56.510 **Integration of the multi-sensory information for the perception of gravitational vertical** *Ippei Negishi, Hirohiko Kaneko, Haruki Mizushina*

56.511 **Blood pressure response to roll depends on both visual and non-visual factors** *Dahlia Y. Balaban, Michael Barnett-Cowan, Jeff Sanderson, Laurence R. Harris*

56.512 **One visual stimulus provides two tactile sensations simultaneously** *Motoyasu Honma, Shinichi Koyama, Yoshihisa Osada*

56.513 **Exploring here, seeing where? Visualization with in-situ vs. ex-situ viewing** *Bing Wu, Roberta Klatzky, George Stetten*

56.514 **Gawking and Fondling: Multimodal Perception of 3D Shape** *Flip Phillips, Eric Egan, Benson Perry*

Search 3

56.515 **Search for mean(ing): Parallel processes mediate ensemble coding** *Jason Haberman, David Whitney*

56.516 **Visual search after frontal eye field lesions in humans** *Alexandra List, Martijn van Koningsbruggen, Robert Rafal*

56.517 **Visual search in real-world scenes: Effects of target cue specificity and cue lead time on component search processes** *George Malcolm, John Henderson*

56.518 **The role of local and global clutter in visual search** *Melissa Beck, Maura Lohrenz, J. Greg Trafton, Marlin Gendron*

56.519 **Dissociating preattentive vision and preattentive attentional guidance** *Louis Chan, William Hayward*

56.520 **Do T-junctions slow down visual search?** *Johan Hulleman*

56.521 **A colour-orientation asymmetry for priming within a search trial: Previewing features of individual search items immediately before conjunction search** *Elizabeth Olds, Jeffery Jones, Tim Graham*

56.522 **Selection and timing of gaze fixations in visual conjunction search** *Kelly Shen, Martin Paré*

56.523 **Pop-out for interocular conflict** *Chris L.E. Paffen, Ignace T.C. Hooge, Jeroen S. Benjamins, Hinze Hoogendoorn*

56.524 **Rapidly resuming visual search and same/different judgments: The influence of task difficulty and stimulus complexity** *Samuel Norman-Haignere, Justin Jungé, Marvin Chun*

56.525 **Selectivity for multiple orientations in visual search** *Abtine Tavassoli, Ian van der Linde, Alan Bovik, Lawrence Cormack*

56.526 **Feature- and location-based attention in color/orientation conjunctive visual search** *Xiaohua Zhuang, Thomas V. Papathomas*

56.527 **Modeling interactions between visually-responsive and movement-related neurons in FEF during saccade visual search** *Braden A. Purcell, Richard P. Heitz, Jeremiah Y. Cohen, Gordon D. Logan, Jeffrey D. Schall, Thomas J. Palmeri*

56.528 **Bayesian Theory of Visual Search** *Jeffrey Beck, Wei Ji Ma, Vidhya Navalpakkam*

56.529 **Predicting search efficiency with a low-level visual difference model** *P. George Lovell, Iain D. Gilchrist, David J. Tolhurst, Michelle To, Tomasz Trosciańko*

56.530 **Effect of subjective probability on search termination** *Kazuya Ishibashi, Shinichi Kita*

56.531 **Coordinating Spatial Attention: Using Shared Gaze to Augment Search and Rescue** *Mark Neider, Michelle W. Voss, Arthur F. Kramer*

Wednesday Sessions

Wednesday, May 14, 8:30 - 10:00 am
Talk Session, Vista Ballroom

Binocular Mechanisms 3

Moderator: Laurie Wilcox

8:30 am

61.11 **Are the Positions of Corresponding Points Adaptive for Natural Viewing?** *Martin Banks, Kai Schreiber*

8:45 am

61.12 **Comparison of depth percepts created by binocular disparity, Panum's limiting case, and monoptic depth** *Kazuho Fukuda, Laurie M. Wilcox, Robert S. Allison, Ian P. Howard*

9:00 am

61.13 **Sensitivity to disparity modulations in ground plane surfaces** *Brian Rogers, Charlotte Colam, Christopher Cant*

9:15 am

61.14 **How does perceived depth depend on disparity direction?** *Yu-Chin Chai, Bart Farell*

9:30 am

61.15 **Sensory Eye Dominance is Retinal Location Specific and Affects Stereopsis** *Jingping Xu, Zijiang J. He, Teng Leng Ooi*

9:45 am

61.16 **Humans use stereo and haptic distance cues to improve physical object size estimates** *Peter Battaglia, Marc Ernst, Paul Schrater, Max Di Luca, Tonja Machulla, Daniel Kersten*

Wednesday, May 14, 8:30 - 10:00 am
Talk Session, Royal Palm Ballroom 4-5

Attention to Locations and Features

Moderator: Jan Theeuwes

8:30 am

61.21 **Differentiating Patients from Controls Based on Correlation between Salience and Gaze** *Po-He Tseng, Ian G. M. Cameron, Doug Munoz, Laurent Itti*

8:45 am

61.22 **Spatial Attention Accelerates Inter-Hemispheric Transfer Time** *Ayelet Landau, Lynn Robertson*

9:00 am

61.23 **Surface-based, unpaired feature representations mediate detection of change to feature pairings** *Jun Saiki, Alex O. Holcombe*

9:15 am

61.24 **Attention biases decisions but does not alter appearance** *Keith A. Schneider, Marcell Komlos*

9:30 am

61.25 **Exogenous attention: Less effort, more learning!** *Marisa Carrasco, Abby Rosenbaum, Anna Marie Giordano*

9:45 am

61.26 **The Size of Attentional Window Modulates Attentional Capture** *Jan Theeuwes, Artem V. Belopolsky*

Wednesday, May 14, 10:30 - 12:00 pm
Talk Session, Vista Ballroom

Color Appearance

Moderator: Donald MacLeod

10:30 am

62.11 **Are there phenomenal complementaries?** *Donald MacLeod, Pamela Pallett, Erin Krizay*

10:45 am

62.12 **Chromatic appearance depends on the rate of change of the colour signal (the "slew" rate)** *Andrew Stockman, Hannah Smithson, Jonathan Aboshiha, Peter West, Caterina Ripamonti*

11:00 am

62.13 **Pattern classification on BOLD signals reveals a novel mechanism underlying color filling-in** *Po-Jang Hsieh, Peter Tse*

11:15 am

62.14 **Predicting illuminant-shifted cone excitations: superiority of a non-parametric approach over von Kries' coefficient rule** *David H. Foster, Kamila ¯ychaluk*

11:30 am

62.15 **Colour Constancy of Polychromatic Surfaces** *Anya Hurlbert, Milena Vurro, Yazhu Ling*

11:45 am

62.16 **Color averaging linked to contours, textures and orientation** *Stuart Anstis, Mark Vergeer, Rob van Lier*

Wednesday, May 14, 10:30 - 12:00 pm
Talk Session, Royal Palm Ballroom 4-5

Scene Perception 3

Moderator: Aude Oliva

10:30 am

62.21 **Search for arbitrary objects in natural scenes is remarkably efficient** *Jeremy Wolfe, George Alvarez, Ruth Rosenholtz, Aude Oliva, Antonio Torralba, Yoana Kuzmova, Max Uhlenhuth*

10:45 am

62.22 **High-level aftereffects to natural scenes** *Michelle Greene, Aude Oliva*

11:00 am

62.23 **Cortical Dynamics of bistable form/motion binding: fMRI and eye movements** *Jean Lorenceau, Anne-Lise Paradis, Cédric Lamirel, Jean-Baptiste Poline, Eric Artiges, Bertrand Thirion, Anne Caclin*

11:15 am

62.24 **A Model of Self-Consistent Perception** *Alan Stocker, Eero Simoncelli*

11:30 am

62.25 **Fixation durations in scene viewing: Experimental data and computational modeling** *Antje Nuthmann, Tim J. Smith, John M. Henderson*

11:45 am

62.26 **Change blindness by substituting one natural image with another** *Bruce Bridgeman, Philip Tseng*

Wednesday, May 14, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 1-3

Attention: Inhibition and Capture

63.301 **Cortical control of salient-distracter interference during visual search: can attentional capture be top-down modulated?** *Ignacio Vallines, En-Ju Lin, Hermann Müller*

63.302 **Spatiotemporal dynamics in inhibition of return** *Maha Adamo, Carson Pun, Jay Pratt, Susanne Ferber*

63.303 **Influences of Abrupt vs. Ramped Stimulus Presentation on Location-based Inhibition of Return** *Benjamin Guenther, James Brown*

63.304 **Object- and Location-based Inhibition of Return to Superimposed Surfaces** *Marielle Johnson, Mazyar Fallah, Heather Jordan*

63.305 **Simultaneous feature-based inhibition of attention along multiple dimensions** *Brian Levinthal, Alejandro Lleras*

63.306 **Semantic Marking in Preview Search** *Hengqing Chu, Brian Levinthal, Alejandro Lleras*

63.307 **The spatial distribution of visual marking** *Takayuki Oosugi, Takatsune Kumada, Jun-ichiro Kawahara*

63.308 **What drives memory-driven attentional capture?** *Christian Olivers*

63.309 **Individual differences in resistance to attentional capture** *Keisuke Fukuda, Edward Vogel*

63.310 **Attentional capture is reduced when distractors remain visible in rapidserial visual presentation** *Tomoe Inukai, Takatsune Kumada, Jun Kawahara*

63.311 **Top-down control modulates the effect of capture based on distractor probability** *Jeff Moher, Howard Egeth, Steven Yantis, Veit Stuphorn*

63.312 **Modulation of Attentional Capture for Distractor Object in Serial Presentation Paradigm** *Risa Sawaki, Jun'ichi Katayama*

63.313 **Is Contingent Attentional Capture Not Contingent on Working Memory?** *Lingling Wang, Steven B. Most*

63.314 **Perceptual Objects Capture Attention** *Yaffa Yeshurun, Ruth Kimchi, Guy Sha'shoua, Tomer Carmel*

Perceptual Learning 3

63.315 **Co-Learning Analysis of Two Perceptual Learning Tasks with Identical Input Stimuli Supports the Reweighting Hypothesis** *Chang-Bing Huang, Zhong-Lin Lu, Barbara Dosher*

63.316 **Augmented Hebbian Learning Hypothesis in Perceptual Learning: Interaction between feedback and training accuracy** *Jiajuan Liu, Zhonglin Lu, Barbara Dosher*

63.317 **Perceptual learning in speed discrimination of radial motion** *Xuan Huang, Hongjing Lu, Yifeng Zhou, Zili Liu*

63.318 **A Hebbian-style Dynamic Systems Model of Configural Learning** *Leslie Blaha, James Townsend*

63.319 **Eye-dependent attentional modulation on motion sensitization from speed discrimination** *Chia-huei Tseng, Yating Huang*

63.320 **Sleep enables explicit figure-ground segmentation of unattended textures** *Clara Casco, Daniela Guzzon, Gianluca Campana*

63.321 **Offline processing of memories induced by perceptual visual learning during subsequent wakefulness and sleep: a behavioral study** *Luca Matarazzo, Pierre Maquet, Edit Frankó, Rufin Vogels*

63.322 **Perceptual learning requires a minimal number of trials per session, but no sleep** *Kristoffer Åberg, Elisa Tartaglia, Michael Herzog*

63.323 **Perceptual Training Yields Rapid Improvements in Visually Impaired Youth** *Jeffrey Nyquist, Joseph Lappin, Duje Tadin*

63.324 **Perceptual Learning Is Similar Across the Central Visual Fields** *John Hotson, Kelly Neary, Sulekha Anand*

63.325 **Letter learning: feature detection and integration** *Jordan Suchow, Denis Pelli*

63.326 **House training modifies activity in PPA, RSC, but not FFA** *Jesse S Husk, Lisa R Betts, Kathleen M O'Craven, Patrick J Bennett, Allison B Sekuler*

63.327 **Contrast-reversal abolishes perceptual learning** *Zahra Hussain, Patrick Bennett, Allison Sekuler*

63.328 **Stimulus coding rules for perceptual learning** *Cong Yu, Jun-Yun Zhang, Shu-Guang Kuai, Lu-Qi Xiao, Stanley Klein, Dennis Levi*

Wednesday, May 14, 8:30 am - 12:30 pm Poster Session, Royal Palm Ballroom 6-8

Faces: Adaptation and Context

63.401 **Familiarity for faces and novelty for natural scenes in preference: does similarity matter?** *Eiko Shimojo, Junghuyn Park, Makio Kashino, Shinsuke Shimojo*

63.402 **The influence of processing style on face perception** *Brenda M. Stoesz, Lorna S. Jakobson*

63.403 **Sex, Handedness and Sexual Orientation as Predictors of Face Perception Ability** *Paul W.H. Brewster, Roxana A. Dobrin, Caitlin R. Mullin, Jennifer K.E. Steeves*

63.404 **Dual Perceptual Adaptation in Human Faces: Gender and Age** *Heather Jordan, Marielle Johnson, Mazyar Fallah*

63.405 **Adapting to age** *Sean F. O'Neil, Shernaaz M. Webster, Michael A. Webster*

63.406 **Adaptation Reveals Multichannel-Coded Cells Tuned to Body Orientation in Humans** *Rebecca P. Lawson, Andrew J. Calder*

63.407 **Brief adaptation increases sensitivity of face recognition** *Ipek Oruc, Jason Barton*

63.408 **Face space has a center-surround organization: evidence from a novel contrast-based face-adaptation technique** *Shabnam Rostamirad, Ipek Oruc, Jason J S Barton*

63.409 **Illumination effects on the inverse relationship between face typicality and recognition** *Abhijit Narvekar, Fang Jiang, P. Jonathon Phillips, Alice O'Toole*

Perception and Action: Locomotion and Navigation

63.410 **The effect of walking on perceived visual speed depends on visual speed** *Jan L. Souman, Ilja Frissen, Marc O. Ernst*

63.411 **Imagined self-motion differs from perceived self-motion** *Jennifer Campos, Joshua Siegle, Betty Mohler, Heinrich Bülthoff, Jack Loomis*

63.412 **The influence of relevant action on spatial updating during imagined locomotion** *Benjamin R. Kunz, Sarah H. Creem-Regehr, William B. Thompson*

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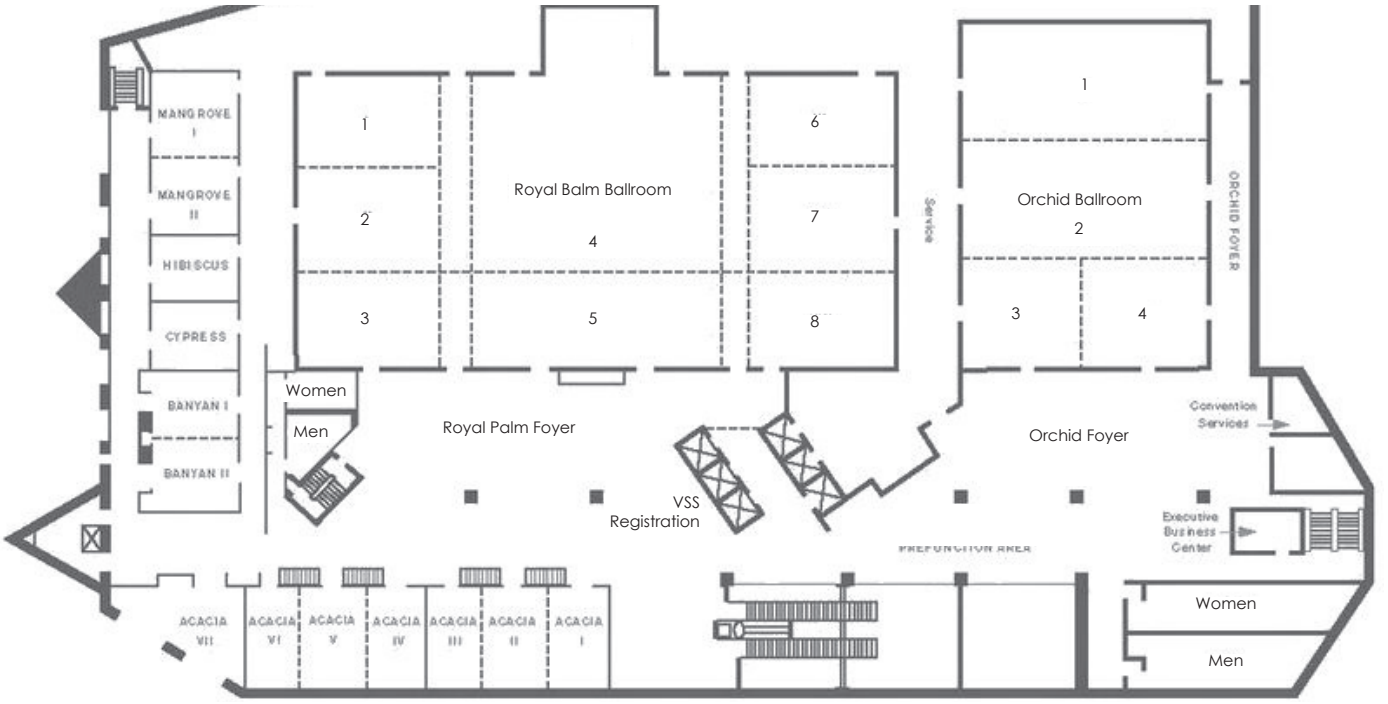
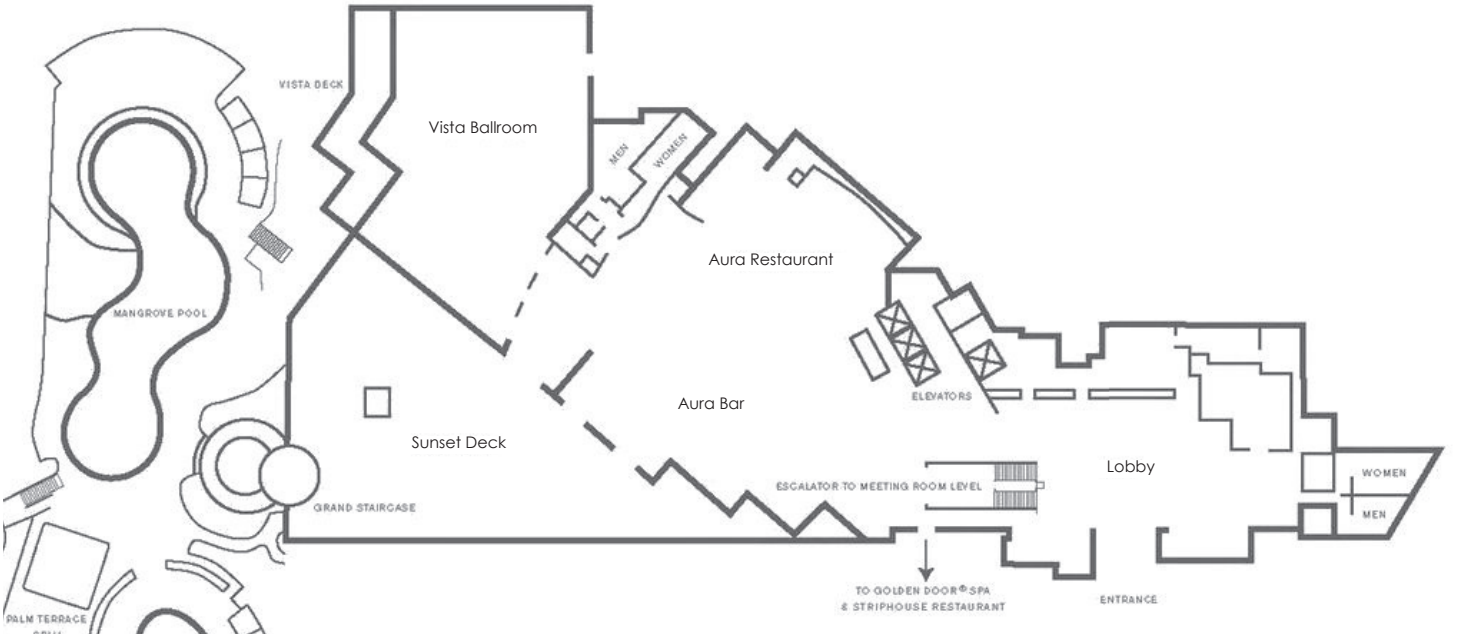


Ballroom Level (2nd Floor)



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