Vision Sciences Society

11th Annual Meeting, May 6-11, 2011
Naples Grande Beach Resort, Naples, Florida

Meeting Program

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Sarah Rosen
T-shirt design (front)

Jordan Suchow and Judy Fan
T-shirt design (back)

VSS 2011 vision sciences society

Contents & Featured Events

Contents

Special Sessions

ARVO at VSS Symposium
Friday, May 6, 5:00 - 6:45 pm, Royal Palm 4-5

VSS Public Lecture
Saturday, May 7, 10:00 – 11:30 am,
Renaissance Academy of Florida Gulf Coast University (off site)

Keynote Address
Saturday, May 7, 7:00 – 8:15 pm, Royal Palm 4-5

Student Career Development Workshop
Sunday, May 8, 12:45 - 1:30 pm, Acacia 4-6

Student Publishing Workshop
Sunday, May 8, 12:45 - 1:30 pm, Mangrove 1-2

VSS Awards & YIA Lecture
Sunday, May 8, 7:00 – 7:45 pm, Royal Palm 4-5

Business Meeting
Tuesday, May 10, 1:45 - 2:15 pm, Royal Palm 4-5

VSS Social Events

Opening Night Reception
Friday, May 6, 7:30 - 9:30 pm, Sunset & Vista Decks

VSS Dinner and Demo Night
Monday, May 9, 7:00 - 10:00 pm,
Dinner: Vista Ballroom, Sunset Deck, Mangrove Pool
Demos: Royal Palm 4-5 & Acacia Meeting Rooms

Open House for Graduate Students & Postdoc Fellows
Tuesday, May 10, 9:30 – 10:30 pm, Acacia 4-6

Club Vision Dance Party
Tuesday, May 10, 10:00 pm – 2:00 am,
Vista Ballroom, Sunset Deck

Satellite Social Events

European Visual Neuroscience Summer School Reunion
Saturday, May 7, 10:00 pm – 12:00 am, Royal Palm Foyer

VVRC-CVS Social
Sunday, May 8, 10:00 pm – 1:00 am,
Vista Ballroom & Sunset Deck

7th Annual Best Illusion of the Year Contest
Monday, May 9, 5:00 – 7:00 pm,
Philharmonic Center for the Arts (off site)

Meeting Schedule

Thursday, May 5

9:00 am – 6:00 pm	Satellite Workshop: Shape Perception	Orchid Ballroom 3-4

Friday, May 6

9:00 am – 9:00 pm	Registration Open	Royal Palm Foyer
12:00 – 2:00 pm	Symposium Session 1	Royal Palm 1-3, 4-5 & 6-8
2:00 – 2:30 pm	Coffee Break	Royal Palm Foyer
2:30 – 4:30 pm	Symposium Session 2	Royal Palm 1-3, 4-5 & 6-8
4:30 – 5:00 pm	Coffee Break	Royal Palm Foyer
5:00 - 6:45 pm	ARVO @ VSS Symposium	Royal Palm 4-5
5:45 - 9:30 pm	Exhibits Open	Orchid Foyer
6:45 - 9:30 pm	Evening Poster Session	Vista Ballroom, Orchid Ballroom
7:30 - 9:30 pm	Opening Night Reception	Sunset & Vista Decks

Saturday, May 7

7:00 am – 6:45 pm	Registration Open	Royal Palm Foyer
7:30 – 8:00 am	Morning Coffee	Royal Palm Foyer, Orchid Foyer
8:00 – 9:45 am	Talk Session	Royal Palm 1-3 & 4-5
8:15 am – 12:15 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom, Vista Ballroom
8:15 am – 6:30 pm	Exhibits Open	Orchid Foyer
10:00 – 10:30 am	Coffee Break	Royal Palm Foyer, Orchid Foyer
10:00 – 11:30 am	VSS Public Lecture	Renaissance Academy of Florida Gulf Coast University (off site)
10:45 am - 12:30 pm	Talk Session	Royal Palm 1-3 & 4-5
12:30 - 2:30 pm	Lunch Break	Purchase a lunch at VSS Marketplace and head to the beach!*
2:30 – 4:15 pm	Talk Session	Royal Palm 1-3 & 4-5
2:45 – 6:30 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom, Vista Ballroom
4:30 – 5:00 pm	Coffee Break	Royal Palm Foyer, Orchid Foyer
5:15 – 6:45 pm	Talk Session	Royal Palm 1-3 & 4-5
7:00 – 8:15 pm	Keynote Address	Royal Palm 4-5
10:00 pm – 12:00 am	European Visual Neuroscience Summer School Reunion	Royal Palm Foyer

Sunday, May 8

7:00 am – 6:45 pm	Registration Open	Royal Palm Foyer
7:30 – 8:00 am	Morning Coffee	Royal Palm Foyer, Orchid Foyer
8:00 – 9:45 am	Talk Session	Royal Palm 1-3 & 4-5
8:15 am – 12:15 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom, Vista Ballroom
8:15 am – 6:30 pm	Exhibits Open	Orchid Foyer
10:00 – 10:30 am	Coffee Break	Royal Palm Foyer, Orchid Foyer
10:45 am - 12:30 pm	Talk Session	Royal Palm 1-3 & 4-5
12:30 - 2:30 pm	Lunch Break	Purchase a lunch at VSS Marketplace and head to the beach!*
12:45 - 1:30 pm	Student Career Development Workshop	Acacia 4-6
12:45 - 1:30 pm	Student Publishing Workshop	Mangrove 1-2
2:30 – 4:15 pm	Talk Session	Royal Palm 1-3 & 4-5
2:45 – 6:30 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom, Vista Ballroom
4:30 – 5:00 pm	Coffee Break	Royal Palm Foyer, Orchid Foyer
5:15 – 6:45 pm	Talk Session	Royal Palm 1-3 & 4-5
7:00 – 7:45 pm	VSS Awards & YIA Lecture	Royal Palm 4-5
10:00 pm – 1:00 am	VVRC-CVS Social	Vista Ballroom & Sunset Deck

Monday, May 9

7:30 am – 12:30 pm	Registration Open	Royal Palm Foyer
7:30 – 8:00 am	Morning Coffee	Royal Palm Foyer, Orchid Foyer
8:00 – 9:45 am	Talk Session	Royal Palm 1-3 & 4-5
8:15 am – 12:15 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom
8:15 am – 12:15 pm	Exhibits Open	Orchid Foyer
10:00 – 10:30 am	Coffee Break	Royal Palm Foyer, Orchid Foyer
10:45 am - 12:30 pm	Talk Session	Royal Palm 1-3 & 4-5
12:30 - 5:00 pm	Afternoon off	
5:00 – 7:00 pm	7th Annual Best Illusion of the Year Contest	Philharmonic Center for the Arts (off site)
7:00 – 9:00 pm	Demo Night Dinner	Vista Ballroom, Sunset Deck, Mangrove Pool
7:30 – 10:00 pm	Demo Night Demos	Royal Palm 4-5 & Acacia Meeting Rooms

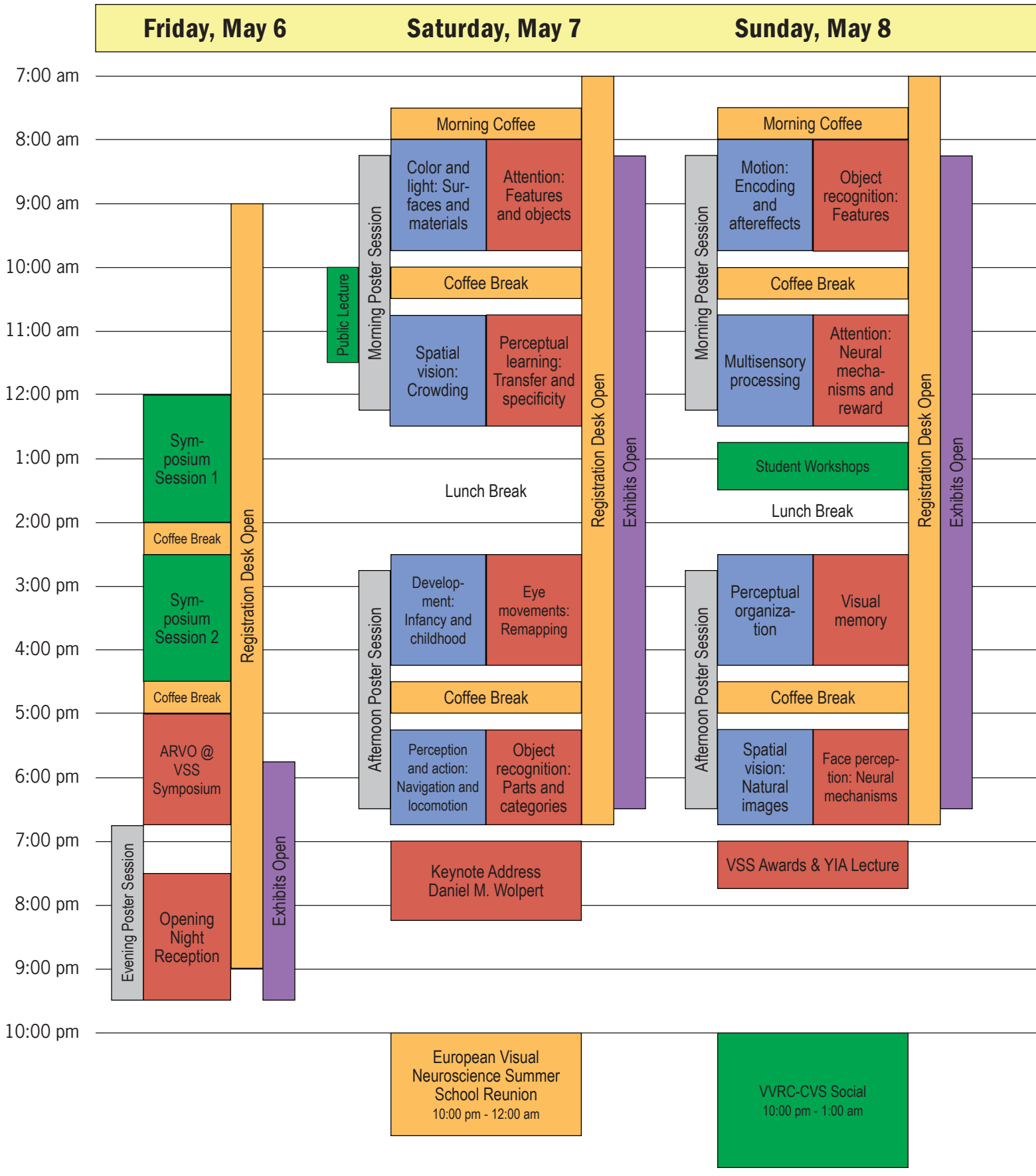
Tuesday, May 10

7:30 am – 6:45 pm	Registration Open	Royal Palm Foyer
7:30 – 8:00 am	Morning Coffee	Royal Palm Foyer, Orchid Foyer
8:00 – 9:45 am	Talk Session	Royal Palm 1-3 & 4-5
8:15 am – 12:15 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom, Vista Ballroom
8:15 am – 7:00 pm	Exhibits Open	Orchid Foyer
10:00 – 10:30 am	Coffee Break	Royal Palm Foyer, Orchid Foyer
10:45 am - 12:30 pm	Talk Session	Royal Palm 1-3 & 4-5
12:30 - 1:45 pm	Lunch Break	Purchase a lunch at VSS Marketplace and head to the beach!*
1:45 - 2:15 pm	Business Meeting	Royal Palm 4-5
2:30 – 4:30 pm	Talk Session	Royal Palm 1-3, & 4-5
3:00 – 7:00 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom, Vista Ballroom
4:45 – 5:15 pm	Coffee Break	Royal Palm Foyer, Orchid Foyer
5:30 – 7:15 pm	Talk Session	Royal Palm 1-3 & 4-5
9:30 – 10:30 pm	Open House for Graduate Students and Postdoctoral Fellows	Acacia 4-6
10:00 pm – 2:00 am	Club Vision Dance Party	Vista Ballroom, Sunset Deck

Wednesday, May 11

7:30 am – 12:45 pm	Registration Open	Royal Palm Foyer
7:30 – 8:00 am	Morning Coffee	Royal Palm Foyer
8:00 – 9:45 am	Talk Session	Royal Palm 1-3 & 4-5
8:15 am – 12:15 pm	Poster Session	Royal Palm 6-8, Orchid Ballroom
10:00 – 10:30 am	Coffee Break	Royal Palm Foyer
10:45 am – 12:30 pm	Talk Session	Royal Palm 1-3 & 4-5
12:30 pm	Meeting Ends	

* Salads, sandwiches, and snacks are available for purchase at the VSS Marketplace located on the ballroom level between the Royal Palm and Orchid Foyers.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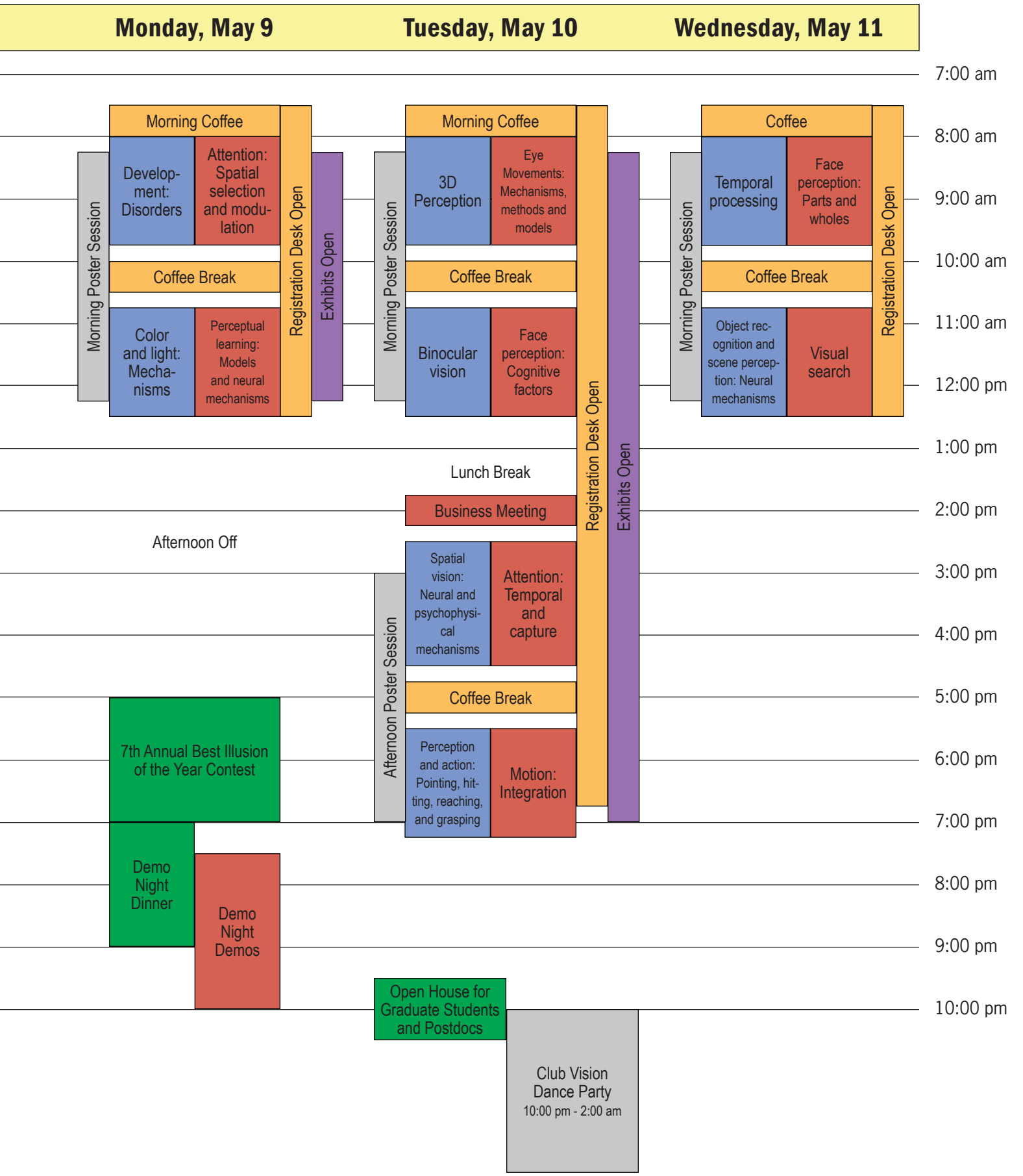
Sym-posium Session 1
Coffee Break
Sym-posium Session 2
Coffee Break
ARVO @ VSS Symposium
Evening Poster Session
Opening Night Reception
Registration Desk Open
Exhibits Open
Public Lecture
Morning Poster Session
Morning Coffee
Color and light: Sur-faces and materials
Attention: Features and objects
Coffee Break
Spatial vision: Crowding
Perceptual learning: Transfer and specificity
Lunch Break
Afternoon Poster Session
Develop-ment: Infancy and childhood
Eye movements: Remapping
Coffee Break
Perception and action: Navigation and locomotion
Object recognition: Parts and categories
Registration Desk Open
Exhibits Open
Keynote Address Daniel M. Wolpert
European Visual Neuroscience Summer School Reunion
10:00 pm - 12:00 am
Morning Poster Session
Morning Coffee
Motion: Encoding and aftereffects
Object recognition: Features
Coffee Break
Multisensory processing
Attention: Neural mecha-nisms and reward
Student Workshops
Lunch Break
Afternoon Poster Session
Perceptual organiza-tion
Visual memory
Coffee Break
Spatial vision: Natural images
Face percep-tion: Neural mechanisms
Registration Desk Open
Exhibits Open
VSS Awards & YIA Lecture
VVRC-CVS Social
10:00 pm - 1:00 am
Color Key:
Royal Palm 1-3
Royal Palm 4-5
Royal Palm Foyer
Orchid Foyer
Vista, Royal Palm 6-8, Orchid
See Meeting Schedule


Monday, May 9
Tuesday, May 10
Wednesday, May 11
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8:00 pm
9:00 pm
10:00 pm
Morning Coffee
Development: Disorders
Attention: Spatial selection and modulation
Coffee Break
Color and light: Mechanisms
Perceptual learning: Models and neural mechanisms
Morning Poster Session
Registration Desk Open
Exhibits Open
Morning Coffee
3D Perception
Eye Movements: Mechanisms, methods and models
Coffee Break
Binocular vision
Face perception: Cognitive factors
Morning Poster Session
Registration Desk Open
Exhibits Open
Coffee
Temporal processing
Face perception: Parts and wholes
Coffee Break
Object recognition and scene perception: Neural mechanisms
Visual search
Morning Poster Session
Registration Desk Open
Lunch Break
Business Meeting
Afternoon Off
Spatial vision: Neural and psychophysical mechanisms
Attention: Temporal and capture
Coffee Break
Perception and action: Pointing, hitting, reaching, and grasping
Motion: Integration
Afternoon Poster Session
7th Annual Best Illusion of the Year Contest
Demo Night Dinner
Demo Night Demos
Open House for Graduate Students and Postdocs
Club Vision Dance Party
10:00 pm - 2:00 am

Poster Schedule

Poster Setup and Takedown

All poster sessions are held in the Royal Palm 6-8 and Orchid Ballroom on the Ballroom level, and Vista Ballroom on the Lobby level. The last three digits of your poster number indicate the number of your poster board.

Posters should be put up at the beginning of a session and taken down at the end. Authors of even numbered posters are expected to be present at their posters during the entire "Even Author Presents" time; and authors of odd numbered posters during the entire "Odd Author Presents" time. Authors may be present longer if desired.

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.

Friday Afternoon, May 6

Setup: 5:45 – 6:45 pm
Session: 6:45 – 9:30 pm
Even Authors Present: 7:30 – 8:30 pm
Odd Authors Present: 8:30 – 9:30 pm
Room: Orchid Ballroom
- Eye movements: Cognition and scenes
- Object recognition: Neural mechanisms
- Visual memory: Objects and features

Room: Vista Ballroom
- Attention: Neural mechanisms I
- Attention: Inattention and attention blindness
- Color and light: Lightness and brightness
- Perceptual learning: Plasticity and adaptation

Take down: 9:30 – 10:00 pm

Saturday Morning, May 7

Setup: 7:30 – 8:15 am
Session: 8:15 am – 12:15 pm
Even Authors Present: 9:15 – 10:15 am
Odd Authors Present: 10:15 – 11:15 am
Room: Royal Palm 6-8
- Eye movements: Saccades and fixations
- Visual search: Eye movements

Room: Orchid Ballroom
- Binocular vision: Binocular combination and rivalry
- 3D perception: Contours, shading and texture
- Attention: Tracking
- Visual memory: Encoding and retrieval

Room: Vista Ballroom
- Motion: Biological motion
- Face perception: Wholes and parts
- Face perception: Disorders
- Perception and action: Pointing and hitting

Take down: 12:15 – 12:45 pm

Saturday Afternoon, May 7

Setup: 2:00 – 2:45 pm
Session: 2:45 – 6:30 pm
Even Authors Present: 3:45 – 4:45 pm
Odd Authors Present: 4:45 – 5:45 pm
Room: Royal Palm 6-8
- Color and light: Adaptation and constancy
- Multisensory processing: Visual, tactile and vestibular interactions

Room: Orchid Ballroom
- Perceptual organization: Contours and surfaces
- Attention: Endogenous and exogenous
- Attention: Features and objects

Room: Vista Ballroom
- Noise and uncertainty
- Motion: Neural mechanisms
- Spatial vision: Mechanisms
- Spatial vision: Encoding and decoding

Take down: 6:30 – 7:00 pm

Sunday Morning, May 8

Setup: 7:30 – 8:15 am
Session: 8:15 am – 12:15 pm
Even Authors Present: 9:15 – 10:15 am
Odd Authors Present: 10:15 – 11:15 am
Room: Royal Palm 6-8
- Eye movements: Perisaccadic perception
- Development: Childhood and infancy
- Development: Amblyopia

Room: Orchid Ballroom
- Face perception: Expression and emotion
- Face perception: Experience and learning
- Perception and action: Reaching and grasping
- Scene perception: Memory and context

Room: Vista Ballroom
- Attention: Capture
- Motion: Flow, depth, and spin
- 3D perception: Dynamic cues
- Temporal processing

Take down: 12:15 – 12:45 pm

Sunday Afternoon, May 8

Setup: 2:00 – 2:45 pm
Session: 2:45 – 6:30 pm
Even Authors Present: 3:45 – 4:45 pm
Odd Authors Present: 4:45 – 5:45 pm
Room: Royal Palm 6-8
- Color and light: Memory, language and synesthesia
- Binocular vision: Binocular rivalry and awareness

Room: Orchid Ballroom
- Perception and action: Navigation and wayfinding
- Perception and action: Neural Mechanisms
- Multisensory processing: Visual-auditory interactions
- Attention: Neural mechanisms II
- Attention: Models I

Room: Vista Ballroom
- Perceptual learning: Models
- Perceptual learning: Neural mechanisms
- Eye movements: Pursuit and following
- Motion: Local mechanisms and models

Take down: 6:30 – 7:00 pm

Monday Morning, May 9

Setup: 7:30 – 8:15 am
Session: 8:15 am – 12:15 pm
Even Authors Present: 9:15 – 10:15 am
Odd Authors Present: 10:15 – 11:15 am
Room: Royal Palm 6-8
- Perceptual organization: Shapes and objects
- Attention: Temporal

Room: Orchid Ballroom
- Eye movements: Methods and gaze
- Binocular vision: Eye movements
- Face perception: Features and configuration
- Face perception: Neural mechanisms

Take down: 12:15 – 12:45 pm

Tuesday Morning, May 10

Setup: 7:30 – 8:15 am
Session: 8:15 am – 12:15 pm
Even Authors Present: 9:15 – 10:15 am
Odd Authors Present: 10:15 – 11:15 am
Room: Royal Palm 6-8
- Attention: Spatial selection and modulation

Room: Orchid Ballroom
- Perceptual organization: Segmentation and grouping
- Attention: Shifting
- Visual search: Elements, cues and configurations
- Perceptual learning: Transfer and specificity

Room: Vista Ballroom
- Perception and action: Locomotion
- Object recognition: Experience and learning
- Spatial vision: Summary statistics
- Spatial vision: Crowding and eccentricity

Take down: 12:15 – 12:45 pm

Tuesday Afternoon, May 10

Setup: 2:15 – 3:00 pm
Session: 3:00 – 7:00 pm
Even Authors Present: 4:00 – 5:00 pm
Odd Authors Present: 5:00 – 6:00 pm
Room: Royal Palm 6-8
- Face perception: High-level features
- Development: Face perception

Room: Orchid Ballroom
- Visual search: Natural scenes and practical tasks
- Visual search: Neural mechanisms
- 3D perception: Natural and virtual scenes
- Scene perception: Features and categories

Room: Vista Ballroom
- Development: Disorders
- Object recognition: Categories
- Object recognition: Features
- Attention: Divided

Take down: 7:00 – 7:30 pm

Wednesday Morning, May 11

Setup: 7:30 – 8:15 am
Session: 8:15 am – 12:15 pm
Even Authors Present: 9:15 – 10:15 am
Odd Authors Present: 10:15 – 11:15 am
Room: Royal Palm 6-8
- Motion: Higher-order, objects, and illusions
- Perceptual organization: Mechanisms and models

Room: Orchid Ballroom
- Visual memory: Capacity and resolution
- Attention: Emotion
- Attention: Reward
- Binocular vision: Stereopsis
- Development: Lifespan and aging

Take down: 12:15 – 12:45 pm

Talk Schedule

Saturday, May 7

Time	Royal Palm 1-3	Royal Palm 4-5
8:00 – 9:45 am	Color and light: Surfaces and materials	Attention: Features and objects
10:45 am – 12:30 pm	Spatial vision: Crowding	Perceptual learning: Transfer and specificity
2:30 – 4:15 pm	Development: Infancy and childhood	Eye movements: Remapping
5:15 – 6:45 pm	Perception and action: Navigation and locomotion	Object recognition: Parts and categories

Sunday, May 8

Time	Royal Palm 1-3	Royal Palm 4-5
8:00 – 9:45 am	Motion: Encoding and aftereffects	Object recognition: Features
10:45 am – 12:30 pm	Multisensory processing	Attention: Neural mechanisms and reward
2:30 – 4:15 pm	Perceptual organization	Visual memory
5:15 – 6:45 pm	Spatial vision: Natural images	Face perception: Neural mechanisms

Monday, May 9

Time	Royal Palm 1-3	Royal Palm 4-5
8:00 – 9:45 am	Development: Disorders	Attention: Spatial selection and modulation
10:45 am – 12:30 pm	Color and light: Mechanisms	Perceptual learning: Models and neural mechanisms

Tuesday, May 10

Time	Royal Palm 1-3	Royal Palm 4-5
8:00 – 9:45 am	3D perception	Eye movements: Mechanisms, methods and models
10:45 am – 12:30 pm	Binocular vision	Face perception: Cognitive factors
2:30 – 4:30 pm	Spatial vision: Neural and psychophysical mechanisms	Attention: Temporal and capture
5:30 – 7:15 pm	Perception and action: Pointing, hitting, reaching, and grasping	Motion: Integration

Wednesday, May 11

Time	Royal Palm 1-3	Royal Palm 4-5
8:00 – 9:45 am	Temporal processing	Face perception: Parts and wholes
10:45 am – 12:30 pm	Object recognition and scene perception: Neural mechanisms	Visual search

Speaker Information

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.

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.

Keynote Address

Daniel M. Wolpert

Professor of Engineering, University of Cambridge

Daniel Wolpert is Professor of Engineering at the University of Cambridge and a Fellow of Trinity College. Daniel's research focuses on computational and experimental approaches to human sensorimotor control. Daniel read medical sciences at Cambridge and clinical medicine at Oxford. After working as a medical doctor for a year he completed a D. Phil. in the Physiology Department in Oxford. He then worked as a postdoctoral fellow and Fulbright Scholar at MIT, before moving to the Institute of Neurology, UCL. In 2005 he took up his current post in Cambridge. He was elected a Fellow of the Academy of Medical Sciences in 2004 and was awarded the Royal Society Francis Crick Prize Lecture (2005) and has given the Fred Kavli Distinguished International Scientist Lecture at the Society for Neuroscience (2009). Further details can be found on www.wolpertlab.com.

Probabilistic models of human sensorimotor control

Saturday, May 7, 7:00 - 8:15 pm
Royal Palm 4-5

The effortless ease with which humans move our arms, our eyes, even our lips when we speak masks the true complexity of the control processes involved. This is evident when we try to build machines to perform human control tasks. While computers can now beat grandmasters at chess, no computer can yet control a robot to manipulate a chess piece with the dexterity of a six-year-old child. I will review our recent work on how the humans learn to make skilled movements covering probabilistic models of learning, including Bayesian and structural learning, how the brain makes and uses motor predictions, and the interaction between decision making and sensorimotor control.

ARVO @ VSS Symposium

What the retina tells us about central visual processing

Friday, May 6, 5:00 - 6:45 pm, Royal Ballroom 4-5

Chair: Tony Movshon

This symposium was designed in conjunction with David Williams and Maarten Kamermans as part of the continuing series of exchange symposia that highlight the historical and continued shared areas of interests of VSS and ARVO. This year, the symposium is at VSS, intended to bring us some of the latest advances presented at ARVO. There will be three talks, all showcasing aspects of retinal function that are crucial for understanding central visual processing. The speakers are all experts and experienced speakers who will give excellent accounts of their important work.

Explaining receptive field properties at the level of synapses: lessons from the retina

Jonathan Demb, University of Michigan

A visual neuron's receptive field is generated by the combination of its unique pattern of synaptic inputs and intrinsic membrane properties. These cellular mechanisms underlying the receptive field can be studied efficiently in retinal ganglion cells, in vitro. In this talk, I will describe recent progress in understanding the mechanisms for visual computations and adaptation in retinal circuitry.

High-resolution receptive field measurements in primate retinal ganglion cells, and their implications for color vision

Greg Field, Salk Institute

Identifying the connectivity of the myriad neurons within a circuit is key to understanding its function. We developed a novel technique to map the functional connectivity between thousands of cone photoreceptors and hundreds of ganglion cells in the primate retina. These measurements reveal the nature of cone sampling by midget ganglion cells, providing insight to the origins of red-green color opponency.

The effect of genetic manipulation of the photopigments on vision and the implications for the central processing of color

Jay Neitz, University of Washington

The processes responsible for color perception are accessible experimentally because of a wealth of genetic variations and because some components lend themselves to genetic manipulation. The addition of an opsin gene, as occurred in the evolution of color vision, and has been done experimentally produces expanded capacities providing insight into the neural circuitry.

Speaker Biographies

Jonathan Demb

University of Michigan

Jonathan Demb trained with David Heeger at Stanford and with Peter Sterling at the University of Pennsylvania before joining the faculty at the University of Michigan, where he is a member of the Departments of Opthalmology and Visual Science, and of Molecular, Cellular, and Developmental Biology. Dr. Demb's research seeks to understand how synaptic interactions among the 60 or so types of neurons in the retina form functional circuits that create the signals that supply the inputs to the visual centers of the CNS.

Greg Field

Salk Institute

Greg Field trained with Fred Rieke at the University of Washington, Seattle, before moving to the the Systems Neurobiology Laboratory at the Salk Institute for Biological Studies, where he studies population coding in primate retina. Dr. Field uses parallel recording methods to study the the functional connectivity of the retina: the influence each input neuron has on every output, the degree to which these influences are plastic, and how this connectivity serves perception and behavior.

Jay Neitz

University of Washington

Jay Neitz trained with Gerald Jacobs at UC Santa Barbara, and held faculty positions at the Medical College of Wisconsin; he is now Bishop Professor in the Department of Ophthalmology at the University of Washington. Dr. Neitz studies the genetic basis of normal vision and vision disorders, using molecular genetic, biochemical, imaging, electrophysiological and behavioral approaches. He is developing gene replacement therapy for cone photoreceptors in primates, both as a research tool for studying fundamental mechanisms of color vision, and as a potential therapy for forms of vision loss.

2011 Elsevier/VSS Young Investigator Award

Alexander C. Huk

The University of Texas at Austin

Dr. Alexander C. Huk has been chosen as the 2011 winner of the Elsevier/VSS Young Investigator Award. Dr. Huk is an Associate Professor of Neurobiology in the Center for Perceptual Systems at the University of Texas at Austin. Dr. Huk impressed the committee with the broad range of techniques he has brought to bear on fundamental questions of visual processing and decision making. Studying both human and non-human primates with psychophysical, electrophysiological and fMRI approaches, Dr. Huk has made significant, influential and ground-breaking contributions to our understanding of the neural mechanisms involved in motion processing and the use of sensory information as a basis for perceptual decisions. His contributions are outstanding in their breadth as well as their impact on the field and represent the uniqueness of the VSS community to integrate behavioral and neural approaches to vision science.

Some new perspectives in the primate motion pathway

Sunday, May 8, 7:00 pm, Royal Palm 4-5

The dorsal ("where") stream of visual processing in primates stands as one of the most fruitful domains for bridging neural activity with perception and behavior. In early stages of cortical processing, neurophysiology and psychophysics have elucidated the transformations from dynamic patterns of light falling upon the retinae, to simple 1D motion signals in primary visual cortex, and then to the disambiguated 2D motions of complex patterns and objects in the middle temporal area (MT). In later stages, the motion signals coming from MT have been shown to be accumulated over time in parietal areas such as LIP, and this decision-related activity has been quantitatively linked to behavioral outputs (i.e., the speed and accuracy of perceptual decisions). In this talk, I'll revisit this pathway and suggest new functions in both the visual and decision stages. In the first part, I'll describe new results revealing how 3D motion is computed in the classic V1-MT circuit. In the second part, I'll address whether LIP responses are really a "neural correlate" of perceptual decision-making, or instead reflect a more general type of sensorimotor integration. These lines of work suggest that by building on the already well-studied primate dorsal stream, both psychophysics and physiology can investigate richer perceptual functions and entertain more complex underlying mechanisms.

Satellite Events

European Visual Neuroscience Summer School Reunion

Saturday, May 7, 10:00 pm - 12:00 am, Royal Palm Foyer

Organizers: Paola Binda, Jan Brascamp, Chris Klink, Maria Olkkonen, Martin Rolfs, Tom Wallis

A casual meet-up over drinks for alumni of the Rauischholzhausen Visual Neuroscience summer schools. Alumni from all years are encouraged to attend. This will be a nice opportunity to see who's at the meeting, and for different generations of students to meet.

For more information, contact Paola Binda.

VVRC-CVS Social at VSS

Sunday, May 8, 10:00 pm – 1:00 am
Vista Ballroom and Sunset Deck

Organizers: Jeff Schall, Vanderbilt University and Duje Tadin, University of Rochester

Continuing the long tradition of social events organized by the Vanderbilt Vision Research Center (VVRC) and the University of Rochester's Center for Visual Science (CVS), we invite all VSS attendees to the VVRC-CVS social at VSS. The event will be held on Sunday, May 8th from 10:00 pm to 1:00 am in the Vista Ballroom at the Naples Grande Resort. First 200 guests will receive a free drink ticket.

7th Annual Best Illusion of the Year Contest

Monday, May 9, 5:00 – 7:00 pm (Doors open at 4:30 pm)
Philharmonic Center for the Arts
(Less than a 10 minute walk from the Naples Grande Hotel)

Organizer: Susana Martinez-Conde, Neural Correlate Society

The Best Illusion of the Year Contest is a celebration of the ingenuity and creativity of the world's premier illusion creators. Contestants from all around the world have submitted novel illusions (unpublished, or published no earlier than 2010), and an international panel of judges has narrowed them to the TOP TEN. At the Contest Gala in the Naples Philharmonic Center for the Arts, the top ten illusionists will present their creations and the attendees of the event (that means YOU!) will vote to pick the TOP THREE WINNERS!

The Amaz!ng Randi, the renowned magician, escapologist, and skeptic, will give a presentation/magic performance during the vote counting.

Everybody is invited and families are welcome! For more information, see http://illusioncontest.neuralcorrelate.com.

Club Vision Dance Party

Tuesday, May 10, 10:00 pm – 2:00 am, Vista Ballroom and Sunset Deck

Club Vision, held on the last night of the meeting, is the final social event of VSS. The dance party will once again feature Kevin Smith, one of Florida's most talented and requested DJs. Kevin will offer a vast selection of music and special lighting effects to entertain and entice attendees to the dance floor. You can submit song requests in advance by filling out a Song Request form at the Registration Desk, or just talk to Kevin during the party.

The wearing of glowing or flashing accessories is a tradition for the party and we will again be distributing free glow-in-the-dark necklaces and bracelets. Feel free to also bring your own creative accessories.

You'll be happy to learn that we've negotiated reduced-priced drinks at the party.

Don't miss the highlight of the VSS social calendar. We'll see you at Club Vision!

Fourth International Workshop on Shape Perception in Human and Computer Vision

Thursday, May 5, 9:00 am - 6:00 pm, Orchid Ballroom 3-4

Shape has been one of the most important aspects of computer vision since the field has been established. This is hardly surprising, considering the fact that the shape of an object carries rich information about the object's identity and function. However, while shape formed the backbone of most early recognition systems, the advent of appearance models in the 1990's drew the spotlight away from shape. Only recently is shape starting to make a comeback in the mainstream recognition community, with contours once again starting to play a prominent role. Many classical topics, including shape hierarchies, contour-based representations, perceptual grouping, and shape priors are being revisited by today's researchers, often without the hindsight of earlier foundational work in human and/or computer vision.

This workshop will evaluate what we know about shape now and what should be done next. It will bring together prominent speakers from both human and computer vision shape perception communities to reflect on their experience and identify future research directions.

This will be the fourth such multidisciplinary workshop devoted specifically to shape perception. The first and third workshops were held as a part of the European Conference on Computer Vision (ECCV 2008 and 2010):

http://viper.psych.purdue.edu/workshops/iwsphcv08/

http://viper.psych.purdue.edu/workshops/iwsphcv2010/

There, students and researchers in computer vision who attended the workshop had the opportunity to learn of the progress made by high-profile shape perception researchers in human vision and the challenges they face. These workshops culminated with lively panel discussions which attempted to explore what the two communities can learn from each other and what the common issues are. These workshops were a major success, drawing a large audience to hear a set of outstanding invited speakers and an engaging discussion.

The second workshop was held in August, 2009 as part of the European Conference on Visual Perception (ECVP):

http://viper.psych.purdue.edu/workshops/iwsphcv09/

There, the situation was reversed, with students and researchers in human vision having the opportunity to learn of the progress made by high-profile shape perception researchers in computer vision and the challenges they face. Following the same format as the other two workshops, the second workshop was again a major success. The fourth workshop will resemble the second one, in that a major human vision conference will be a forum of a multidisciplinary discussion of shape.

Organization and Workshop Format

The format of the one-day workshop will be 12 invited speakers (six human vision, six computer vision). Each talk will last 25 minutes plus 5 minutes for discussion. The speakers have been chosen to represent a broad cross-section of shape perception research, representing the major paradigms in both the human and computer vision communities. Speakers will be encouraged to reflect on their experience, identify critical challenges, etc., rather than present snapshots of their latest research results.

Organizers

Sven Dickinson, University of Toronto, Toronto, Canada
Zygmunt Pizlo, Purdue University, West Lafayette, USA

Schedule

9:00 am	**Corrado Caudek**, University of Florence 3D shape perception and action in the peripersonal space
9:30 am	**Sinisa Todorovic**, Oregon State University Recognizing Human Activities by their Space-Time Shapes
10:00 am	**Richard Murray**, York University 3D shape perception: priors and contextual cues
10:30 am	Coffee Break
11:00 am	**Song-Chun Zhu**, UCLA Object Representation: Structure vs. Appearance and 3D vs. 2D - an Information Theoretical Perspective
11:30 am	**Michael S. Lewicki**, Case Western Reserve University Perceptual organization of boundaries in natural scenes
12:00 pm	**Björn Ommer**, University of Heidelberg Beyond the Sum of Parts: Voting by Grouping Dependent Image Fragments
12:30 pm	Lunch
2:00 pm	**Ken Nakayama**, Harvard Subjective Contours
2:30 pm	**Ben Kimia**, Brown University Perceptual Fragments: Bottom-Up and Top-Down Use of Shape in Object Recognition
3:00 pm	**Rudiger von der Heydt**, Johns Hopkins Contour grouping in the visual cortex
3:30 pm	Coffee Break
4:00 pm	**John Tsotsos**, York University Attending to Shape
4:30 pm	**Edward H. Adelson**, MIT Surfaces, materials, and shape
5:00 pm	**David Jacobs**, University of Maryland Understanding Shape by Comparing Images
5:30 pm	Panel Discussion

Elsevier/ *Vision Research* Travel Awards

VSS congratulates this year's recipients of the 2011 Elsevier/ *Vision Research* Travel Awards.

Guy Ben-Yosef
Department of Computer Science, Ben-Gurion University, Israel
Advisor: Ohad Ben-Shahar

Stefania Bracci
Northumbria University
Advisor: Magdalena Ietswaart

Johan Carlin
Medical Research Council Cognition and Brain Sciences Unit, Cambridge, UK
Advisors: James Rowe, Andy Calder

Joshua Cosman
University of Iowa
Advisor: Shaun Vecera

Robert Ennis
SUNY College of Optometry
Advisors: Barry Lee, Qasim Zaidi

Edward Ester
University of Oregon
Advisor: Ed Awh

Stephanie C. Goodhew
University of Queensland
Advisor: Paul E. Dux

Renee Karas
University of Melbourne
Advisor: Allison M. McKendrick

Fumi Katsuki
Wake Forest University School of Medicine
Advisor: Christos Constantinidis

Yaroslav Konar
McMaster University
Advisors: Allison B. Sekuler, Patrick J. Bennett

Claudia Lunghi
University of Florence
Advisors: David C. Burr, Maria Concetta Morrone

Diego Mendoza
McGill University
Advisor: Julio C. Martinez-Trujillo

Aidan P. Murphy
University of Birmingham
Advisor: Andrew Welchman

Michela Panichi
Institute of Neuroscience, CNR Pisa
Advisor: Stefano Baldassi

Eric A. Reavis
Dartmouth College
Advisor: Peter Tse

Sarah Rosen
New York University
Advisor: Denis Pelli

Kristian Sandberg
Aarhus University Hospital and University College London
Advisor: Morten Overgaard

Inna Tsirlin
York University
Advisors: Laurie Wilcox, Robert S. Allison

Sara C. Verosky
Princeton University
Advisors: Alexander Todorov, Nick Turk-Browne

Hua Yang
Dartmouth College
Advisor: Ming Meng

Student Events

Student Career Development Workshop

Sunday, May 8, 12:45 - 1:30 pm, Acacia 4-6

Chair: Andrew Welchman, Birmingham University

After a brief presentation by Dr. Welchman the floor will be open for questions and discussion. Dr. Welchman will cover topics related to making career choices during the transition from Ph.D. student to PostDoc and how to plan your PostDoc period. Several other senior scientists will participate: Alex Huk, University of Texas at Austin, Anya Hurlbert, University of Newcastle upon Tyne and Cathleen Moore, University of Iowa.

Student Publishing Workshop

Sunday, May 8, 12:45 - 1:30 pm, Mangrove 1-2

Chair: Andrew B. Watson, Editor-in-Chief of the Journal of Vision

This workshop will start with a brief overview. Andrew Watson will present some advice on how to select the right journal for your publication, how to visually present your data most effectively, and how to efficiently manage the reviewing process. Several other leading scientists will be available for questions and discussion: Marty Banks, University of California, Berkeley, Concetta Morrone, University of Pisa and Cong Yu, Beijing Normal University.

Open House for Graduate Students and Postdoctoral Fellows

9:30 - 10:30 pm, Acacia 4-6

Students and postdocs comprise more than half of the attendees at VSS. Last year at VSS 2010, approximately 60 student and postdoc members met with members of the VSS Board of Directors for an informal discussion. The idea for the Student workshops came out of that meeting as did many other suggestions, some of which are being implemented at this year's meeting.

We look forward to another informative exchange this year. The Open House immediately precedes Club Vision.

The 2011 VSS Public Lecture

Jeremy Wolfe

Harvard Medical School

Jeremy Wolfe became interested in visual perception during the course of a summer job at Bell Labs in New Jersey after his senior year in high school. He graduated summa cum laude from Princeton in 1977 with a degree in Psychology and went on to obtain his PhD in 1981 from MIT, studying with Richard Held. His PhD thesis was entitled "On Binocular Single Vision". Wolfe remained at MIT as a lecture, assistant professor, and associate professor until 1991. During that period, he published papers on binocular rivalry, visual aftereffects, and accommodation. In the late 1980s, the focus of the lab shifted to visual attention. Since that time, he has published numerous articles on visual search and visual attention. He is, perhaps, best known for the development of the Guided Search theory of visual search. In 1991, Wolfe moved to Brigham and Women's Hospital where he is Director of the Visual Attention Lab and of the Radiology Department's Center for Advanced Medical Imaging. He is Professor of Ophthalmology and Radiology at Harvard Medical School.

At present, the Visual Attention Lab works on basic problems in visual attention and their application to such problems as airport security and medical screening. The lab is funded by the US National Institutes of Health, Office of Naval Research, and Department of Homeland Security. The Center for Advanced Medical Imaging is devoted to understanding and improving the consumption of images in clinical radiology.

Wolfe has taught Introductory Psychology, Psychology and Literature, and Sensation and Perception at MIT & Harvard and other universities. He is the Editor of the journal, Attention, Perception and Psychophysics (AP&P, formerly P&P). Wolfe is Past-President of the Eastern Psychological Association and President of Division 3 of the American Psychological Association. He is chair of the Soldier Systems Panel of the Army Research Lab Technical Assessment Board (NRC). He won the Baker Memorial Prize for teaching at MIT in 1989. He is a fellow of the American Assoc. for the Advancement of Science, the American Psychological Association (Div. 3 & 6), the American Psychological Society, and a member of the Society for Experimental Psychologists. He lives in Newton, Mass. with his wife, Julie Sandell (Professor of Neuroanatomy and Assoc. Provost at Boston U.). has three sons (Benjamin - 24, Philip - 22, and Simon - 15), a cat, two snakes, and occasional mice.

The Salami at the Airport: Visual Search Gets Real

Saturday, May 7, 10:00 – 11:30 am,
Renaissance Academy of Florida Gulf Coast University

We are built to search. Our ancestors foraged for food. We search for pens, keys, and cars in parking lots. Some searches are hard and important: think about the search for cancer in x-rays or security threats in luggage. We are remarkably good at search. How do you mange to find the cornstarch in the cupboard? However, we are not as good as we would like to be. How could you miss something (like a gun or a tumor) that is, literally, right in front of your eyes? How might we reduce errors in socially important search tasks?

The VSS Public Lecture is jointly sponsored by VSS and the Renaissance Academy of Florida Gulf Coast University

The annual public lecture represents the mission and commitment of the Vision Sciences Society to promote progress in understanding vision, and its relation to cognition, action and the brain. Education is basic to our science, and as scientists we are obliged to communicate the results of our work, not only to our professional colleagues but to the broader public. This lecture is part of our effort to give back to the community that supports us.

Attendee Resources

Abstract Book

A printed Abstract book is no longer provided to each attendee. Printed Abstract books are available for purchase for $12 or you can download an electronic copy in PDF format from the VSS website. See the Registration Desk.

Airport Transportation

VSS has arranged for discounted transportation from Fort Meyers airport to the meeting hotels. Service will be provided by Naples Transportation, Tours & Event Planning (NTT&EP) and is available beginning on Wednesday, May 4 through Thursday, May 12.

The one-way VSS fare is $30/person each way plus a 15% driver gratuity. The airport shuttle will be available within the hours of 9:00 am and 9:00 pm on arrival days and within the hours of 4:00 am and 4:00 pm on departure days. Roundtrip purchase is not required. Tickets must be purchased a minimum of three days in advance. Individuals from VSS 2011 will be grouped together for transportation.

Transportation drop-offs (and pick-ups) will include The Naples Grande Beach Resort, The Edgewater Beach Hotel, the Hilton Naples, the Staybridge Hotel, the Park Shore Resort and the Residence Inn.

To contact NTT&EP, call 239.262.3006.

ATM

An ATM is located in the main lobby of the hotel.

Baggage Check

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

Bike Rentals

In the past few years, bikes have become a popular mode of transportation between the Naples Grande and the overflow hotels. The Naples Grande has set up a special "bike parking" area on the first level of the garage for VSS bikes. Here is information on two local bike rental companies:

Big Momma's Bicycles (www.bigmommasbicycles.com) is conveniently located down the street from the Naples Grande, less than a mile from the Naples Grande. Bikes can be rented by the day or by the week - delivery & pick-up are available. For reservations, call 239-263-0728 or after hours call or text 239-734-7734. Amy from Big Momma's will be glad to assist you with anything from late pickups to a flat tire!

Trek (www.trekbikesflorida.com) is located a few miles from the Naples Grande. Bikes can be rented by the day or by the week and Trek has offered to deliver bikes to the Naples Grande for VSS attendees. For reservations, call 866-876-4858. For online reservations, go to: www.trekbikesflorida.com/products/rentals.

Business Center

The Business Center is located in the Orchid Foyer.

Child Care

The Naples Grande invites children between the ages of 4 and 12 to experience arts and crafts, sports, water activities and fun-filled games amidst the resort's beautiful natural setting. 1/2 day, full-day and extended day sessions are available.

Open to all VSS attendees. You need NOT be staying at the Naples Grande for your children to take advantage of this program.

Reservations can be made by calling the Naples Grande Kids Club at 239.597.3232, ext. 5612.

Morning Session: 8:15 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: $44 per child

Afternoon Session: 1:00 – 4:30 pm

Afternoon session includes swimming and activities at the Mangrove Mountain Pool, arts and crafts and a tasty treat. (bring swimsuit for afternoon session) Cost: $39 per child

Extended Afternoon: 1:00 – 7:00 pm

Cost: $80 per child

Full Day: 8:15 am – 4:30 pm

Cost is $69 per child.

Extended Day: 8:15 am – 7:00 pm

Cost: $150 per child

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: $49 a child

Kids Club is available on the following days:

Friday, May 6

Afternoon session, 1:00 – 4:30 pm
Extended Afternoon, 1:00 – 7:00 pm
Kids Night Out, 6:00 – 9:00 pm
Note: The Evening Poster Session and Reception is 6:45 - 9:30 pm

Saturday, May 7

Morning session, 8:15 am – 1:00 pm
Afternoon session, 1:00 – 4:30 pm
Extended Afternoon, 1:00 – 7:00 pm
Full Day, 8:15 am – 4:30 pm
Extended Day, 8:15 am – 7:00 pm
Kids Night Out, 6:00 – 9:00 pm

Note: The Keynote Address is 7:00 - 8:15 pm

Sunday, May 8

Morning session, 8:15 am – 1:00 pm
Afternoon session, 1:00 – 4:30 pm
Extended Afternoon, 1:00 – 7:00 pm
Full Day, 8:15 am – 4:30 pm
Extended Day, 8:15 am – 7:00 pm

Monday, May 9

Morning session, 8:15 am – 1:00 pm

Tuesday, May 10

Morning session, 8:15 am – 1:00 pm
Afternoon session, 1:00 – 4:30 pm
Extended Afternoon, 1:00 – 7:00 pm
Full Day, 8:15 am – 4:30 pm
Extended Day, 8:15 am – 7:00 pm

Wednesday, May 11

Morning session, 8:15 am – 1:00 pm

The Naples Grande Kids Club is operated by the Naples Grande Hotel. VSS provides information for those who are interested.

Copying and Printing

Copying and printing can be done at the Business Center, located in the Orchid Foyer.

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

A printer will be available in the Cyber Vision Internet Café located in the Banyan 1-2 meeting room.

Duplication/Recording

Photography, audio taping, video recording, digital taping, or any other form of duplication, is strictly prohibited in the sessions and poster areas.

Fitness Center

The Fitness Center is open 24 hours a day and is available to ALL VSS attendees. See the Reception desk if you are not staying at the Naples Grande Resort and would like access to the Fitness Center.

Food Service/Catering

Complimentary coffee and tea, and a light continental breakfast will be available each morning in the Royal Palm Foyer. Coffee, tea, and refreshments will also be served each afternoon between afternoon talk sessions.

VSS provides a reception and one dinner. **Opening Night Reception** is on Friday night, during the first poster session. Each attendee is given two free drink tickets good on this night only. Appetizers will also be served. A full dinner is provided to all attendees on **Demo Night.**

The VSS schedule gives a generous two-hour lunch period to take advantage of the beautiful surroundings and amenities of the Naples Grande Resort. 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.

VSS Marketplace

The VSS Marketplace, located on the ballroom level between the Royal Palm and Orchid foyers, offers a selection of reasonably-priced breakfast, lunch and snack items. All items are between $1 and $6.

Open Friday, 11:00 am - 3:00 pm; Saturday through Tuesday, 7:30 am – 3:00 pm. Wednesday, 7:30 - noon.

Spressi

Located in the resort lobby, Spressi offers a selection of hot coffee drinks and teas, light breakfast and lunch fare to go. Open 6:00 am – 9:00 pm

Paradise Grill

Located at the beach, serving salads, sandwiches, snacks and refreshing beverages. Open 11:00 am – 5:00 pm for food, and 11:00 am to sunset for beverages.

Palm Terrace Pool Bar & Grill

Informal poolside bar serving salads, sandwiches, hamburgers and snacks. Open 11:00 am – 5:00 pm for food, and 11:00 am – 6:00 pm for beverages.

Aura Restaurant

Located in the resort lobby, featuring innovative and sumptuous menus for breakfast, lunch and dinner.

Open 7:00 am – 12:00 pm daily for breakfast. $15 breakfast buffet offered daily

Open 12:00 – 3:00 pm daily for lunch.

Open 6:00 – 10:00 pm daily for dinner.

Aura Bar

Bar is open 12:00 pm-12:00 am daily.

Guests

Guests are allowed complimentary entry into one VSS session to see the poster or talk of the person they are guests of.

Guests must register at the VSS Registration Desk upon arrival and must be accompanied by the VSS attendee. Guests must wear a badge for entrance into the session they attend and for social events as well.

Guests are welcome at all social functions (Club Vision, Friday Night Reception and Demo Night). Fees for guests to eat at Demo Night: Adults $25; Youth 6-12 $10; Children under 6 free.

Internet Access

VSS provides free wireless Internet access on the Ballroom level. You must enter the access code 1657VSS to access the wireless Internet. This code must be entered each day.

The Naples Grande Hotel provides wireless Internet access on the Lobby level of the hotel (in the lobby and restaurant areas). No access code is required.

If you did not bring your own computer, a limited number of laptop computers with free Internet access are available for your use in the Cyber Vision Internet Café located in the Banyan meeting room on the Ballroom level. A printer is also available in the Banyan meeting room.

If you are a VSS attending staying at the Naples Grande Hotel, then free Internet access is also available in your guest room.

Lost and Found

Lost and found is located at the 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 Resort. Turn right off of the main entrance driveway, then look for the parking garage entrance on your left. Overflow parking is available on Seagate Drive.

Pool & Beach

All hotel facilities accessible without a room key are available to all VSS attendees and their guests. Clam Pass beach is a public beach available to everyone. Free electric carts run continuously from the hotel to the beach and back.

Shipping

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

VSS Trolley Shuttle

An evening trolley will run between the Naples Grande Resort and downtown Naples (with several stops in between). The shuttle is complimentary to VSS attendees and guests, and will run approximately every 30 minutes from Saturday through Tuesday. The shuttle will also run on Monday afternoon. A schedule and map can be found in your tote bag or you can pick up a copy at the Registration Desk.

How to Contact Us

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

Exhibitors

VSS recognizes the following companies who are exhibiting at VSS 2011. Thank you for your participation and support.

Exhibit Hours

Friday, May 6, 5:45 – 9:30 pm
Saturday, May 7, 8:15 am – 6:30 pm
Sunday, May 8, 8:15 am – 6:30 pm
Monday, May 9, 8:15 am – 12:15 pm
Tuesday, May 10, 8:15 am – 7:00 pm

All exhibits are located in the Orchid Foyer.

Applied Science Laboratories

Booth 1

As one of the premier eye tracking companies, ASL has been credited for the immense progress they have made in eye tracking technologies, being the first to pioneer many innovations that are now industry standards. ASL's innovative spirit continues to flourish, offering the broadest and most comprehensive line of video based eye trackers and analysis software on the market today. Due to their broad range of products, ASL is ideal for various research projects ranging from academic studies to market research. ASL's manufacturing facility is located in the USA allowing them to accommodate custom eye tracking requirements in a timely and professional manner. In addition to their quality eye tracking hardware and analysis software, ASL has been recognized for their superior, long-term customer service and technical support. www.asleyetracking.com

Arrington Research, Inc.

Booth 7

220 Hz ViewPoint EyeTracker® systems from Arrington Research are now shipping. All systems include a Software Developers Kit (SDK), real-time Ethernet communication, built-in stimulus presentation, post-hoc data analysis tools, a MATLAB toolbox, many other 3rd Party product interfaces and examples. Great for both human and non-human primates and can be provided with Analog and TTL communication to ensure seamless communication with your existing equipment. ViewPoint EyeTracker® systems are the easiest and best value available and include light-weight head mounted, HMD and head fixed systems. Arrington Research has been providing reliable affordable eye trackersfor the research market worldwide for almost 15 years. Please visit www.ArringtonResearch.com for more details.

Cambridge Research Systems

Booth 2

Cambridge Research Systems provides a range of novel solutions for vision science and human brain mapping.

We are pleased to announce our agreement with BARCO to supply their latest Reference Monitor which we think is ideal for present calibrated colour stimuli. The monitor can be integrated with the new Bits#, ViSaGe MKII or your own DVI graphics system. Ask us about what makes their cutting edge display technology suitable for your research.

Bits# (Bits Sharp) unites trusted CRS hardware features for high resolution calibrated stimulus display and synchronous data collection with community supported tools like Psychtoolbox-3 and PsychoPy. If you have a ViSaGe of any vintage, talk to us about how you can convert your device to the Bits# platform.

BOLDscreen is our new high brightness, high contrast, high resolution, MRI-compatible LCD monitor. The monitor is designed by CRS for scientific applications: it has a programmable LED backlight and a lag-free light output which is synchronous to the video input. The equipment is portable, easy to setup right at the rear of the bore and produces no interference in 3T functional sequences. We also provide MRI-compatible eye tracking, a range of response devices (e.g. button boxes and joysticks), plus accessories like MRI-compatible spectacles.

To find out more, talk to Steve Elliott during VSS and visit our website: www.crsltd.com

The MIT Press

Booth 3

Please come by The MIT Press booth to see our newest and classic vision titles and receive a 30% discount on all titles purchased.

Oxford University Press

Booth 12

Visit the Oxford booth for 20% off on Adams: Social Vision; Bar: Predictions in the Brain; Bub: Perceptual Expertise; Breitmeyer: Blindspots; Hansen: MEG; Snowden: Basic Vision; Oakes: Early Perceptual and Cognitive Development; and many others.

Sensics, Inc.

Booth 5

Sensics offers lightweight professional head mounted Displays (HMDs) that combine panoramic field of view, high resolution and comfort. The unique Sensics technology delivers stunning image quality, unmatched immersion and realism. Commonly-used Sensics HMDs include a single OLED based 60/70 degree Field of View (FOV) device with 1280x1024 resolution and a 120x45 degree FOV device with 1920x1080 resolution. Higher-end models are also available. Sensics also offers low latency wireless HMDs as well as Augmented Reality HMDs. The level of immersion, field of view and resolution offered by Sensics products have made them the research tool of choice in leading universities worldwide.

SMI Eye & Gaze Tracking

Booth 11

SMI 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. Experiment Center 360° continues to serve researchers, corporations and consultants worldwide by offering a simple solution to stimulus presentation, data acquisition and analysis.

SR Research Ltd.

Booth 6

SR Research, maker of the world leading EyeLink High-Speed eye tracker line, have been developing advanced eye tracking technologies and serving world class support to our researcher user base since 1992. Now offering the world's first 1000 Hz eye tracker for use in MRI and MEG environments, this same core device can be cost effectively configured to be used in standard lab environments as well. Why buy multiple eye trackers when you may only need one! Visit our both for more information and a discussion of existing installations.

Please visit http://www.sr-research.com for details on our eye tracking hardware and software product range, including the latest Experiment Builder software, now supporting both Windows and Mac OS X! We will also be demonstrating integration with the new cutting edge hardware made by VPixx Technologies, including their Response Pads and the DATAPixx real-time hardware toolbox.

Tobii Technology

Booth 8

Tobii Technology is the world leader in hardware and software solutions for eye tracking, enabling a computer to tell exactly where a person is looking and thereby offering new powerful ways to understand human behavior. Products are used in hundreds of leading research labs worldwide, in domains such as development psychology, human computer interaction research, industrial design and advertising research, cognitive psychology, ophthalmology, neurophysiology and reading studies.

The company is based in Stockholm, Sweden, with branches in the US and Germany. Products are sold directly and through resellers and partners worldwide. Visit www.tobii.com for more information.

VPixx Technologies Inc.

Booth 13

VPixx Technologies welcomes the vision community to VSS 2011, and is excited to demonstrate our new VIEWPixx LCD display. The VIEWPixx has been designed and constructed according to the specifications of the vision science community, and has a unique combination of features including high bit depth, 1920x1200 resolution, 120 Hz refresh rate, and deterministic display timing. In addition, the VIEWPixx includes an embedded DATAPixx data acquisition system, permitting microsecond synchronization between visual stimulation and other types of I/O including audio stimulation, button box input, TTL trigger output, analog acquisition, LCD stereo goggles, and more! The VIEWPixx is supported by the PsychToolbox under Matlab and free open-source Octave. Visit our booth to see the VIEWPixx, the DATAPixx, and our new fMRI-compatible fiber-optic response pads. VPixx Technologies will be hosting the third annual response-time showdown during demo night this year. The demo is a simple game in which you must press a red or green button as fast as you can when the button lights up and you hear a beep. Do it well, and win a prize!

WorldViz

Booth 9

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.

9th Annual VSS Dinner and Demo Night

Monday, May 9, 7:00 – 10:00 pm

Buffet Dinner: 7:00 – 9:00 pm
Vista Ballroom, Sunset Deck and Mangrove Pool

Demos: 7:30 – 10:00 pm
Royal Palm 4-5 and Acacia Meeting Rooms

Please join us Monday evening for the 9th Annual VSS Demo Night, a spectacular night of imaginative demos solicited from VSS members. The demos highlight the important role of visual displays in vision research and education.

This year, Arthur Shapiro, Dejan Todorovic, and Gideon Caplovitz are co-curators for Demo Night.

New This Year - We are pleased to announce that ViperLib is sponsoring a "best demo for ViperLib" prize. Thanks in part to the generosity of ECVP, the best demo (or two) will be awarded the honor of being featured on ViperLib and will receive 100 Euros or Pounds Sterling. (The winner gets to decide on their currency of preference).

Buffet dinner is served on the Sunset Terrace, Sunset Deck and Mangrove Pool. Demos are located upstairs on the ballroom level in the Royal Palm 4-5 and Acacia Meeting Rooms.

Be sure to visit the exhibitor area in the Orchid Foyer as some exhibitors have also prepared special demos for Demo Night.

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 Dinner Buffet. Guests and family members of all ages are welcome to attend the demos but must purchase a ticket for dinner. You can register your guests at any time during the meeting at the VSS Registration Desk, located in the Royal Palm Foyer. A desk will also be set up at the entrance to the dinner in the Vista Ballroom at 6:30 pm.

Guest prices

Adults: $25
Youth (6-12 years old): $10
Children under 6: free

A Gilbert Stuart Portrait of You

Krista Ehinger, MIT; Eric Altschuler, MD, PhD, New Jersey Medical School

Gilbert Stuart (1755-1828) painted the first five US Presidents who died before photography, and also President John Quincy Adams (1767-1848) who was photographed. We appreciated such portrait/photograph pairs as a ''Rosetta Stone'' to the pre-photography era, and created a model to obtain photographic representations for those never photographed. We ''reverse'' the model to make ''Gilbert Stuart portraits'' from photos of attendees.

A New Method to Induce Phantom Limbs

Elizabeth Seckel, V.S. Ramachandran, and Beatrix Krause, UCSD; Claude Miller, UCLA

If one is dark adapted, a brief, bright flash may bleach the photoreceptors, allowing whatever is seen during the flash to be "imprinted" on the retinas for several seconds. By uncoupling visual feedback from proprioception, we will give you the experience of phantom limbs!

Bend it like Beckham

Kurt Debono, Alexander C. Schütz, and Karl R. Gegenfurtner, Justus Liebig University, Giessen, Germany

A pursued target travelling in a straight line on a moving background appears to initially move in the direction of the background before bending towards its veridical direction. The illusion occurs when a peripheral marker is aligned with background motion, and breaks down when it is aligned with target direction.

Blink-Induced-Blindness (BIB) in Multiple-Object-Tracking (MOT) shows when vision does not extrapolate

Deborah J. Aks, Hristyian Kourtev, Harry Haladjian, and Zenon Pylyshyn, Rutgers University; Jiye Shen, SR-Research Ltd.

Do we predict where moving objects reappear when MOT is interrupted? Our blink-contingent demonstration suggests not. When tracking objects that stop during eye-blinks, motion-discontinuities are indistinguishable from continuous motion. Not only do paths appear surprisingly smooth, but tracking is easier. Thus, both percept and performance are not predicted by extrapolation.

Class A procedure for measuring visual aftereffects

Qasim Zaidi and Rob Ennis, Graduate Center for Vision Research SUNY College of Optometry

You will see how to make objective measures of the magnitudes of aftereffects of color, brightness, motion, tilt, spatial-frequency, size, and other visual qualities, using identity judgments on time-varying stimuli. You will also see how you can take this method and apply it to simultaneous adaptation along multiple qualities.

Color Rotation and Expansion/Contraction Standstill

Max R. Dürsteler, University Hospital Zurich

A slowly rotating color wheel with alternating sectors painted in isoluminant colors is perceived as standing still in the presence of a stationary luminance mask.

Rings painted in isoluminant colors are alternating expanding or contracting. When shown behind a stationary luminance mask, the precept of expansion or contraction is lost.

Colorful demonstrations of perceptual phenomena

Orit Baruch, University of Haifa

Several perceptual phenomena are demonstrated in paintings. It is demonstrated that our perceptual tendencies obscure other alternatives which may be present in the images.

Dichoptic Completion

Gao Meng, School of Medicine, Tsinghua University, Beijing, China; Li Zhaoping, Department of Computer Science, University College London

We named the illusion "dichoptic completion", when two very different images in the two eyes are seen simultaneously or complement each other, rather than rivaling against each other, or averaging in perception.

Dyops™ (short for Dynamic Optotypes™) as a revolutionary new method for determining visual acuity

Allan Hytowitz, Animated Vision Associates, LLC; John Hayes, Yu-Chi Tai, Sung Ouk Jang, James Sheedy, Vision Performance Institute, College of Optometry, Pacific University

A constantly rotating segmented image provides a precise measure of acuity based upon the maximum distance for detection of that image rotation as determined by the angular size of that image.

''Exorcist 2011'' - Combining the hollow-face and hollow-torso illusions

Thomas V. Papathomas and Tom Grace, Rutgers Unversity

Hollow masks appear as normal convex faces (hollow-mask illusion) and move as viewers move in front of them. We combine hollow masks and "bollow" (convex) torsos. The result is a compelling illusion: torsos and masks rotate in opposite directions; necks twist in a spectacular fashion ("Exorcist illusion").

How Does the Brain Determine Size? A Size Weight Shape Illusion

Elizabeth Seckel, UCSD; Edward M Hubbard, Vanderbilt; Eric L Altschuler, New Jersey Medical School; VS Ramachandran, UCSD

120 years ago Charpentier described a remarkable effect: a larger object feels lighter than a smaller object of the same scale-weight. But how does the brain determine ''size.'' Using sets of discs and annuli attendees can experience for themselves that the brain uses only the largest diameter to determine size.

Infinite X: Illusions of perpetual increases in magnitude

Mark W. Schurgin, Brian R. Levinthal, Alexandra List, Aleksandra Sherman, Satoru Suzuki, Marcia Grabowecky, and Steven L. Franconeri, Northwestern University, Psychology

We present a modification of two- and four-stroke motion that creates a sense of perpetual change in more abstract dimensions, such as size and emotion. This experience is highly sensitive to the timing of a blank frame or reversal of polarity. Furthermore, pausing our animations produces a robust after-effect.

Launching apparent motion: The Michotte gun

Sung-Ho Kim, Jacob Feldman, and Manish Singh, Rutgers University

We will demonstrate that the perception of causality can affect apparent motion. Perceived causality can resolve a motion correspondence problem, and also bias the paths of moving objects.

Lifestyle and its impact on your face

David Perrett, Ross Whitehead, David Hunter, Carmen LeFervre, and Dan Re, University of St Andrews

We show visitors how lifestyle affect their face own appearance. Facial fatness predicts current illnesses and early mortality. Smoking and sun exposure hasten age-related skin wrinkling and uneven pigmentation. Increasing fruit and vegetables consumption and exercise benefit health and modify skin colour in ways that enhance healthy appearance.

Meet a robot that navigates and sees as we do

Yunfeng Li and Tadamasa Sawada, Purdue University; Meng Yi and Longin Jan Latecki, Temple University; TaeKyu Kwon and Yun Shi, Purdue University; Robert M. Steinman, University of Maryland; Zygmunt Pizlo, Purdue University

We will demonstrate a seeing robot, who can: (i) solve the figure-ground organization problem, (ii) navigate within a 3D scene, and (ii) recover 3D shapes of objects.

Minimap based navigation with high-fidelity virtual reality.

Matthias Pusch and Paul Elliott, WorldViz

Literally walk through high-fidelity virtual environments in full scale and experience a stunning sense of immersion. With the new WorldViz minimap implementation, you can intuitively move yourself to any location and easily explore arbitrarily large virtual spaces, while using only a small physical footprint. Simply don a stereoscopic head-mounted display and you're free to walk and explore naturally. Interact with virtual objects using the WorldViz PPT Wand hand interaction device.

Motion aftereffect from an image that isn't moving, on a test image that isn't there

Mark Georgeson, Aston University, UK

You adapt briefly to sine gratings whose contrast reverses in sawtooth fashion over time. Stationary test gratings then appear to be drifting. Then, on a completely blank screen, you will see gratings moving in the opposite direction. The effects reflect spatial and temporal gradient filters in motion encoding (Anstis, 1990).

New Star Trek Illusion

Li Li and Diederick Niehorster, and Joseph Cheng, Department of Psychology, The University of Hong Kong; Sieu Khuu, School of Optometry, University of New South Wales, Australia

We will show how the perceived direction of self-motion specified by the motion signal in a radial flow pattern (like in Star Trek movies) can be biased toward the center of a static radial form pattern composed of dot pairs. Furthermore, we will show how this bias can be reduced by reducing the global form coherence of the static radial form pattern.

Spinning Ellipses

Gideon Paul Caplovitz and Kyle Killebrew, University of Nevada Reno

Who says spinning an ellipse has to be boring?

The disembodied eye

Jordan Suchow and Maryam Vaziri-Pashkam, and Ken Nakayama, Department of Psychology, Harvard University

When looking at an upside down face, the eyes eventually appear to flip right-side up, giving the eery impression that they no longer belong to the face. The same is true of a mouth.

The Emotion Mirror: A Novel Intervention for Facial Expression Production and Perception Training for Children with Autism

Dave Deriso and Josh Susskind, UCSD; Jim Tanaka, UV; John Herrington and Bob Schultz, CHOP; Marian Bartlett, UCSD

We will present a novel use of machine learning and computer vision to aid in the treatment of autism. This demo is an intervention game where cartoon characters mimic facial expressions in real-time to improve the ability of children to produce basic emotion facial expressions.

The Flickering Wheel

Rodika Sokoliuk and Ramakrishna Chakravarthi, Centre de Recherche Cerveau et Cognition, Toulouse

We will present a new dynamic illusion: The Flickering Wheel, a way to visually experience your brain oscillations. The static circular stimulus, built up of alternating black and white sectors, elicits a flickering sensation in its center which is caused by an interaction between eye movements and alpha oscillations.

The Floating Light

Martin Rolfs, New York University, Department of Psychology; Maryam Vaziri Pashkam, Harvard University, Vision Sciences Laboratory

A bright object in a dim frame dramatically shifts position when both are set in motion, breaking the law of common fate. In a three-dimensional setup, either the stimulus set or the observers will move. We will also illustrate disturbingly strong versions of the related Hess-, Pulfrich- and flash-lag-effects.

The Incredible Shrinking Peter Illusion

Stuart Anstis, UC San Diego

Reverse phi makes an image of Pete Thompson continually shrink while SA continually expands, though neither changes in mean size. Pete Thompson will dobtless award this his Viperlib prize.

The Leaning Tower Illusion: a 2D illusion?

Aaron Johnson and Bruno Richard, Concordia University

The Leaning Tower Illusion occurs when an image of a tower appears lopsided when placed next to a copy of itself. In this demo, we show that the illusion does not exist when real towers are placed next to each other, but does exist when viewed on a 2D screen.

The Speed Illusion of Trains

James Lu and Anthony Chen, University High School

In this demo, we show that if you have two objects moving at the same speed, the closer one will appear to be moving faster than the one further away.

Transilience Induced Blindness and Selective Filling-in of Artificial Scotoma

Seiichiro Naito, Makoto Katsumura and Ryo Shohara, Human and Information Science, Tokai University, Japan

The large MIB target figure would disappear. We devised the novel inducing stimuli. The MIB target has been identified as the perceptual or artificial scotoma. We found that any uniform color would fill-in, Neither simple line segments passing under the targets nor fine textures could never fill in.

Unpredictable slopes

Elnaz Nouri, University of Southern California; Mouna Attarha, The University of Iowa

Careful with the slopes! Here, we will show you that surfaces arranged in particular ways trick the visual system into miscalculating the flow of water. Come over to learn why.

Vectorized LITE

Kenneth Brecher, Boston University

We will show fully vectorized images we have constructed based on visually striking art works, such as Isia Leviant's ''Enigma'', Bridget Riley's ''Fall'' and Reginald Neal's ''Squares of Two'' where sharp, large format printing enhances the psychophysical phenomena. The PDF's can be found at: http://lite.bu.edu.

What do deforming shapes teach us about 3-D structure-from-motion?

Anshul Jain and Qasim Zaidi, Graduate Center for Vision Research, SUNY College of Optometry

You will judge the aspect ratios of flexing and rigid 3-D cylinders to test your ability to extract structure from motion without rigidity assumptions. You will also see how rotating symmetric cylinders around oblique axes creates asymmetric percepts corresponding to asymmetries in the image velocity pattern.

What right angle bias?

Lydia Maniatis, American University

The impression of pictorial depth is often attributed to a bias for perceiving right angles and/or parallel lines. This demo was designed to show that a figure may produce depth effects despite the absence of both of these features in the percept.

Member-Initiated Symposia

See the Abstracts book for the full symposium description and the text of each presentation. Symposium rooms have limited capacity and fill up quickly, so plan to arrive early.

Schedule Overview

Friday, May 7, 12:00 – 2:00 pm

S1 Mechanisms of adaptation in different visual cortical areas: electrophysiology, functional imaging and computational modeling, Royal Palm 1-3

S2 Models of Perceptual Learning: Combining Psychophysics, Computation and Neuroscience, Royal Palm 4-5

S3 Perception of Emotion from Body Expression: Neural basis and computational mechanisms, Royal Palm 6-8

Friday, May 7, 2:30 – 4:30 pm

S4 Ongoing fluctuation of neural activity and its relationship to visual perception, Royal Palm 1-3

S5 Prediction in Visual Processing, Royal Palm 4-5

S6 Integrating local motion information, Royal Palm 6-8

S1

Mechanisms of adaptation in different visual cortical areas: electrophysiology, functional imaging and computational modeling

Friday, May 6, 12:00 - 2:00 pm, Royal Palm 1-3

Organizer: Rufin Vogels, Department Neuroscience, K.U. Leuven Medical School, Leuven, Belgium

Presenters: Adam Kohn, Department of Neuroscience, Albert Einstein College of Medicine, New York; Rufin Vogels, Department Neuroscience, K.U. Leuven Medical School, Leuven, Belgium; Kalanit Grill-Spector, Department of Psychology & Neurosciences Institute, Stanford University; Stephen J. Gotts, Laboratory of Brain and Cognition, NIMH/NIH, Bethesda

Symposium Summary

Neural responses are typically reduced when repeating a visual stimulus. Understanding mechanisms of this adaptation or repetition suppression is essential for interpreting data obtained with the popular fMRI-adaptation technique which is used to estimate the stimulus selectivities of neuronal populations in the human brain. Further, neural adaptation effects are thought to underlie behavioral phenomena such as perceptual aftereffects and the improvement in performance upon repetition. We will review current results elucidating the neural mechanisms of adaptation in different visual regions in human and non-human primates, obtained with different physiological measurement techniques and computational modeling.

Presentations

The influence of surround suppression on adaptation effects in primary visual cortex

Adam Kohn, Department of Neuroscience, Albert Einstein College of Medicine, New York

Mechanisms of adaptation of spiking activity and local field potentials in macaque inferior temporal cortex

Rufin Vogels, Department Neuroscience, K.U. Leuven Medical School, Leuven, Belgium

fMRI-Adaptation in Human Ventral Temporal Cortex: Regional Differences Across Time Scales

Kalanit Grill-Spector, Dept. of Psychology & Neurosciences Institute, Stanford University

Mechanisms of repetition suppression in models, monkeys, and humans: A case for greater efficiency through enhanced synchronization

Stephen J. Gotts, Laboratory of Brain and Cognition, NIMH/NIH, Bethesda

S2

Models of Perceptual Learning: Combining Psychophysics, Computation and Neuroscience

Friday, May 6, 12:00 - 2:00 pm, Royal Palm 4-5

Organizer: Alexander A. Petrov, Department of Psychology, Ohio State University

Presenters: Zhong-Lin Lu, Department of Psychology, University of Southern California; Alexander A. Petrov, Department of Psychology, Ohio State University; Joshua Gold, Department of Neuroscience, University of Pennsylvania; Peggy Series, Institute for Adaptive and Neural Computation, University of Edinburgh; Dov Sagi, The Weizmann Institute of Science, Israel

Symposium Summary

Perceptual learning has been a topic of growing interest over the last two decades. This symposium presents a multidisciplinary synthesis of current research in perceptual learning, with particular emphasis on computational and/or formal models. Each speaker combines behavioral, computational, and neuroscientific approaches. The symposium is designed to serve both as a tutorial of established ideas and techniques and as a venue to introduce new advances at the cutting edge of this active research area. Thus, it will interest VSS attendees across disciplines and at all levels, from students to experts.

Presentations

Functions and Mechanisms of Perceptual Learning

Zhong-Lin Lu, Department of Psychology, University of Southern California

A Selective-Reweighting Model of Perceptual Learning

Alexander A. Petrov, Department of Psychology, Ohio State University

A neural-coding theory of perceptual learning-related plasticity

Joshua Gold, Department of Neuroscience, University of Pennsylvania; Ching-Ling Teng, University of Virginia, Chi-Tat Law, Stanford University

Disruption and Transfer of Perceptual Learning for Visual Hyperacuity

Peggy Series, Institute for Adaptive and Neural Computation, University of Edinburgh; Grigorios Sotiropoulos, University of Edinburgh; Aaron Seitz, University of California at Riverside

Perceptual learning viewed as a statistical modeling process -- Is it all overfitting?

Dov Sagi, The Weizmann Institute of Science, Israel; Hila Harris, The Weizmann Institute of Science, Israel

S3

Perception of Emotion from Body Expression: Neural basis and computational mechanisms

Friday, May 6, 12:00 - 2:00 pm, Royal Palm 6-8

Organizer: Martin A. Giese, Hertie Institute for Clinical Brain Research, CIN, Tübingen, Germany

Presenters: Maggie Shiffrar, Dept. of Psychology, Rutgers University, Newark, NJ; Beatrice de Gelder, Dept. of Psychology, University of Tilburg, NL; Martin Giese, Hertie Inst. f. Clinical Brain Research, CIN, Tübingen, Germany; Tamar Flash, Weizmann Institute of Science, Rehovot, IL

Symposium Summary

Body postures and movements convey important social information. How such information is visually perceived has been the topic of numerous recent studies. These experiments expoit novel methods for the mathematical modeling of body postures and movements. They help to understand which information is critical for the perception of emotions from body expressions, and how emotion perception and expression are related.

Presentations

The perception of bodily threats
Maggie Shiffrar, Dept. of Psychology, Rutgers University, Newark, NJ

Perceiving bodily expressions with or without visual awareness
Beatrice de Gelder, Dept. of Psychology, University of Tilburg, NL

Features in the perception of interactive and non-interactive bodily movements
Martin Giese, Hertie Inst. f. Clinical Brain Research, CIN, Tübingen, Germany

Invariants common to perception and action in bodily movements
Tamar Flash, Weizmann Institute of Science, Rehovot, IL

S4

Ongoing fluctuation of neural activity and its relationship to visual perception

Friday, May 6, 2:30 - 4:30 pm, Royal Palm 1-3

Organizer: Hakwan Lau, Columbia University, Donders Institute, Netherlands

Presenters: Biyu Jade He, National Institute of Health; Charles Schroeder, Nathan S. Kline Institute for Psychiatric Research, Columbia University; Andreas Kleinschmidt, INSERM-CEA, NeuroSpin, Gif/Yvette, France; Hakwan Lau, Columbia University, Donders Institute, Netherlands; Tony Ro, City University of New York

Symposium Summary

The brain is not silent at rest. Even when our eyes are closed, there are ongoing fluctuations in neural activity in the visual system. What does this activity reflect? Does this activity reflect fluctuations in our attentional states? What causes these fluctuations ? In what ways do these fluctuations influence the way we see things? Can we exploit the nature of such ongoing fluctuations of activity, such that we can design better experiments to investigate how the visual system works? These are the questions that we will try to answer in this symposium.

Presentations

Spontaneous fMRI signals and slow cortical potentials in perception
Biyu Jade He, National Institute of Health

Tuning of the neocortex to the temporal dynamics of attended event streams
Charles Schroeder, Nathan S. Kline Institute for Psychiatric Research, Columbia University

Probing Perceptual Consequences of Ongoing Activity Variations
Andreas Kleinschmidt, INSERM-CEA, NeuroSpin, Gif/Yvette, France

The paradoxical negative relationship between attention-related spontaneous neural activity and perceptual decisions
Hakwan Lau, Columbia University, Donders Institute, Netherlands; Dobromir Rahnev, Columbia University

Oscillatory and Feedback Activity Mediate Conscious Visual Perception
Tony Ro, City University of New York

S5

Prediction in Visual Processing

Friday, May 6, 2:30 - 4:30 pm, Royal Palm 4-5

Organizers: Jacqueline M. Fulvio, Paul R. Schrater; University of Minnesota

Presenters: Jacqueline M. Fulvio, University of Minnesota; Antonio Torralba, Massachusetts Institute of Technology; Lars Muckli, University of Glasgow, UK; Eileen Kowler, Rutgers University; Doug Crawford, York University; Robert A. Jacobs, University of Rochester

Symposium Summary

Prediction is a key component of everyday activity. The symposium will focus on the importance of analyzing the predictive components of human behavior to understand visual processing in the brain. Speakers representing a variety of research areas will lead a discussion under the umbrella of prediction that (i) identifies characteristics and limitations of predictive behavior; (ii) re-frames outstanding questions in terms of predictive modeling; & (iii) outlines experimental manipulations of predictive task components for future work, in hopes of achieving the goal of group discovery of a common set of predictive principles used by the brain as the discussion unfolds.

Presentations

Predictive processing through occlusion
Jacqueline M. Fulvio, University of Minnesota; Paul R. Schrater, University of Minnesota

Predicting the future
Antonio Torralba, Massachusetts Institute of Technology; Jenny Yuen, Massachusetts Institute of Technology

Predictive coding – contextual processing in primary visual cortex V1
Lars Muckli, University of Glasgow, UK; Petra Vetter, University of Glasgow, UK; Fraser Smith, University of Glasgow, UK

Prediction in oculomotor control
Eileen Kowler, Rutgers University; Cordelia Aitkin, Rutgers University; Elio Santos, Rutgers University; John Wilder, Rutgers University

Calculation of accurate 3-D reach commands from initial retinal and extra-retinal conditions
Doug Crawford, York University; Gunnar Blohm, Queen's University

Are People Successful at Learning Sequences of Actions on a Perceptual Matching Task?
Robert A. Jacobs, University of Rochester; Reiko Yakushijin, Aoyama Gakuin University

S6

Integrating local motion information

Friday, May 6, 2:30 - 4:30 pm, Royal Palm 6-8

Organizer: Duje Tadin, University of Rochester, Center for Visual Science

Presenters: Xin Huang, partment of Physiology, University of Wisconsin; Duje Tadin, University of Rochester, Center for Visual Science; David R. Badcock, School of Psychology, The University of Western Australia; Christopher C Pack, Montreal Neurological Institute, McGill University; Shin'ya Nishida, NTT Communication Science Laboratories; Alan Johnston, Cognitive, Perceptual and Brain Sciences, University College London

Symposium Summary

Recent work on global motion processing poses new questions about how local motion estimates are integrated and segmented to support motion perception. These question form the core theme for this symposium that includes both psychophysical (Tadin, Nishida, Badcock and Johnston) and neurophysiological research (Pack and Huang). The speakers will address key current issues including: psychophysical and neural mechanisms involved in solving the aperture problem; the nature of motion integration over space; the role of center-surround interactions in motion perception and coding of ambiguous motions in area MT; and the role of local-lateral verses hierarchical interactions in global motion perception.

Presentations

Stimulus-dependent integration of motion signals via surround modulation

Xin Huang, partment of Physiology, University of Wisconsin; Thomas D. Albright, Vision Center Laboratory, Salk Institute for Biological Studies; Gene R. Stoner, Vision Center Laboratory, Salk Institute for Biological Studies

Center-surround interactions in visual motion perception

Duje Tadin, University of Rochester, Center for Visual Science

The role of form cues in motion processing

David R. Badcock, School of Psychology, The University of Western Australia; Edwin Dickinson, University of Western Australia; Allison McKendrick, University of Melbourne; Anna Ma-Wyatt, University of Adelaide; Simon Cropper, University of Melbourne

Pattern motion selectivity in macaque visual cortex

Christopher C Pack, Montreal Neurological Institute, McGill University

Intelligent motion integration across multiple stimulus dimensions

Shin'ya Nishida, NTT Communication Science Laboratories; Kaoru Amano, The University of Tokyo; Kazushi Maruya, NTT; Mark Edwards, Australian National University; David R. Badcock, University of Western Australia

Emergent global motion

Alan Johnston, Cognitive, Perceptual and Brain Sciences, University College, London; Andrew Rider, Cognitive, Perceptual and Brain Sciences, University College, London; Peter Scarfe, Cognitive, Perceptual and Brain Sciences, University College, London

Abstract Numbering System

Each abstract is assigned a unique 4 to 5 digit number based on when and where it is to be presented. The format of the abstract numbering is DT.RN (where D is the Day, T is the Time, R is the Room and N is the Presentation number).

First Digit - Day	Second Digit - Time Period	Third Digit - Room	Fourth/Fifth Digits - Number
1 Friday	1 Early AM talk session	1 Royal Palm 1-3	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 6-8	
4 Monday	4 Early PM talk session	4 Orchid Ballroom	
5 Tuesday	5 Late PM talk session	5 Vista Ballroom	
6 Wednesday	6 PM poster session		

Examples:

21.16 Saturday, early AM talk in Royal Palm 1-3, 6th talk

36.513 Sunday, PM poster in Vista Ballroom, poster board 513

53.306 Tuesday, AM poster in Royal Palm 6-8, poster board 306

Note: Two digits after the period indicates a talk, three digits indicates a poster (and is also the number of the poster board).

Friday Evening Posters

Eye movements: Cognition and scenes

Poster Session, Orchid Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.401 **An oculomotor trace of cognitive engagement** Yoram Bonneh, Yael Adini, Moshe Fried, Amos Arieli

16.402 **The Moving Eye is Easy to Spy: How Motion Improves Gaze Discrimination** Nicola Anderson, Evan Risko, Alan Kingstone

16.403 **Stronger perception of magic without social misdirection** Jie Cui, Jorge Otero-Millan, Stephen Macknik, Mac King, Susana Martinez-Conde

16.404 **Where Does Visual Joint Attention Come From: A Dual Head-Mounted Eye Tracking Study in Child-Parent Interaction** Chen Yu, Linda Smith, Damian Fricker, Amanda Favata, Tian Xu

16.405 **Dynamic Attention Shifting in Natural Human-Human Interaction** Tian Xu, Chen Yu

16.406 **The effects of goal-oriented task on eye-movements during dynamic natural scene observation** Shuichiro Taya, David Windridge, Josef Kittler, Magda Osman

16.407 **Watching the world go by: Attentional prioritization of social motion during dynamic scene viewing** Tim J. Smith, Parag K. Mital

16.408 **Visuospatial attention shifts during non-visual mental tasks** Nader Noori, Laurent Itti

16.409 **Learning and Decision-Making in a Visual Search Task: Influence of Spatial Statistics on Action Planning and Sensory Processing** He Huang, Angela Yu

16.410 **Examining the influence of scene manipulations and task instruction on scanpaths and inhibition of return** Michael Dodd, Mark Mills, Stefan Van der Stigchel, Andrew Hollingworth

16.411 **Selecting the targets for saccadic eye movements during a statistical estimation task** Chia-Chien Wu, Eileen Kowler

16.412 **The temporal dynamics of target and distractor occurrence in the global effect of saccades.** Jayalakshmi Viswanathan, Manfred Kvissberg, Jason Barton

16.413 **Changes in oculomotor behavior induced by a simulated central scotoma** Bosco S. Tjan, MiYoung Kwon, Anirvan S. Nandy

16.414 **Saccade latencies are modulated by previously learned stimulus value** Marcus Rothkirch, Florian Ostendorf, Philipp Sterzer

16.415 **Dynamic scenes vs. static images: Differences in basic gazing behaviors for natural stimulus sets** Florian Roehrbein, Ruben Coen Cagli, Odelia Schwartz

16.416 **How does object structure influence saccade targeting within an object?** Michi Matsukura, Andrew Hollingworth

16.417 **Perceptual and motor IOR: Components or flavours?** Matthew Hilchey, Raymond Klein

16.418 **Spatial Working Memory is Necessary for Embodied Guidance of Insight** Laura Thomas

16.419 **Modulation of task-related electrophysiological responses by socially relevant stimuli** Stephanie M Morand, Luca Vizioli, Monika Harvey, Marie-Helene Grosbras, Roberto Caldara

16.420 **Look at the Choices too: An Examination of Looking Behaviours in a Multiple Choice Test** Cho Kin Cheng, Lisa-Marie Collimore, Dwayne E. Paré, Shakinaz Desa, Steve Joordens

16.421 **Investigating Selective Attentional Biases in Nutritional Food Labels Through Eye-Tracking in the Disordered-Eating Population** Kelly Hanlon, Basem Gohar, Keith Brewster

16.422 **Saliency, Memory, and Attention Capture in Marketing** Ang-Yu Debra Chiang, David Berg, Laurent Itti

Object recognition: Neural mechanisms

Poster Session, Orchid Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.423 **Position in space defines the structure of object representations throughout the ventral visual pathway.** Cibu Thomas, Dwight Kravitz, Chris Baker

16.424 **The specificity and distribution of the "mind's eye": visual imagery and perception** Sue-Hyun Lee, Dwight Kravitz, Chris Baker

16.425 **Object ensemble coding is distinct from texture processing in the parahippocampal place area** Jonathan S. Cant, Yaoda Xu

16.426 **A method to infer the retinotopy with landmark-based cortical surface co-registration** Pinglei Bao, Dimitrios Pantazis, Bosco S. Tjan

16.427 **Different physiological correlates for perceptual decisions and confidence ratings support multi-stage theories** Matthew Davidson, Olga Felsovalyi, Amy Trongnetrpunya, Xiuyuan Wang, Hakwan Lau, Thomas Thesen

16.428 **Deriving a neural basis for ventral temporal cortex.** J. Swaroop Guntupalli, James Haxby

16.429 **The visual system adapts to average orientation** Jason Haberman, Jordan Suchow, George Alvarez

16.430 **Frequency-tagging object awareness** Roger Koenig-Robert, Rufin VanRullen

16.431 **Organizing visual object knowledge by real-world size in ventral visual cortex** Talia Konkle, Aude Oliva

16.432 **Object information in the anterior regions of the intraparietal sulcus** Ryan E.B. Mruczek, Isabell S. von Loga, Christina S. Konen, Sabine Kastner

16.433 **Robust spatial coding of categorical selectivity in FFA and VWFA** Zhi Yang, Guifang Xu, Lifei Ma, Yi Jiang, Xuchu Weng

16.434 **The contribution of Fourier phase and amplitude spectra to image categorisation: an EEG study.** Magdalena Bieniek, Guillaume Rousselet

16.435 **Surface construction from the onset synchronization of border-ownership cells in V1-V2 model.** Yasuhiro Hatori, Ko Sakai

16.436 **Statistics of natural object structures and object recognition** Meng Li, Zhiyong Yang

16.437 **Visual integration in the human brain** Jedediah Singer, Joseph Madsen, Gabriel Kreiman

16.438 **How does the visual system create complex shape and motion features?** Cheston Tan, Thomas Serre, Tomaso Poggio

16.439 **Recurrent processing during object recognition** Dean Wyatte, Randall O'Reilly

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16.440 **Transcranial magnetic stimulation to lateral occipital cortex disrupts object ensemble processing** Caitlin Mullin, Jennifer Steeves

Visual memory: Objects and features

Poster Session, Orchid Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.441 **Task-specific saliency from sparse, hierarchical models of visual cortex compared to eye-tracking data for object detection in natural video sequences.** Michael Ham, Steven Brumby, Zhengping Ji, Karissa Sanbonmatsu, Garrett Kenyon, John George, Luis Bettencourt

16.442 **What makes an image memorable?** Phillip Isola, Jianxiong Xiao, Antonio Torralba, Aude Oliva

16.443 **A study of visual short-term memory by 'Concentration': Human, spatial-memory-only and object-file simulation results** Ian van der Linde

16.445 **Infants' abilities to parse and enumerate orthogonal ensembles** Mariko Moher, Lisa Feigenson

16.446 **Reaction-Time Assessment of Form and Color Processing in Visual Short-Term Memories** Jane Jacob, Bruno Breitmeyer

16.447 **The relationship between apparent motion and object files** Oliver Roth, Darko Odic, Jonathan Flombaum

16.448 **Mean vs. Range in Statistical Summary Representation** C. Holley Pitts, Melanie Palomares

16.449 **Central attention is used to maintain feature bindings in visual working memory** Amanda E. van Lamsweerde, Melissa R. Beck

16.450 **Are real-world objects represented as bound units? Independent decay of object details from short-term to long-term memory** Timothy Brady, Talia Konkle, George Alvarez, Aude Oliva

16.451 **Shape and color conjunction stimuli are represented as bound objects in visual working memory.** Roy Luria, Ed Vogel

16.452 **Parietal representation of small and large number** Daniel Hyde, Elizabeth Spelke, Yaoda Xu

16.453 **Is There a Bias Toward Global Information in Visual Working Memory?** Justin M. Ericson, Melissa R. Beck

Attention: Neural mechanisms I

Poster Session, Vista Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.501 **Top-down attention alters background connectivity between retinotopic and category-specific visual areas** Naseem Al-Aidroos, Christopher P. Said, Nicholas B. Turk-Browne

16.502 **Differentiating subitizing and counting: a voxel based correlational study** Nele Demeyere, Pia Rotshtein, Glyn Humphreys

16.503 **In the zone or zoning out? Tracking neural and behavioral fluctuations in visual attentional state** Michael Esterman, Sarah Noonan, Monica Rosenberg, Joseph DeGutis

16.504 **The neural correlates of voluntary visual attention to shape, color, and location** Sebastian M. Frank , Eric A. Reavis, Peter J. Kohler, Anton L. Beer, Peter U. Tse, Mark W. Greenlee

16.505 **The bias towards a contralateral representation in parietal activity is increased during full-field attentional tracking** Jonathan Gill, George Alvarez

16.506 **Binding and selective attention increase coherence between distant sites in early visual cortex** Anne Martin, Rudiger von der Heydt

16.507 **Do spatial attention and long-term memory systems overlap? Dorsal and ventral attention network engagement during memory retrieval processes** Stephanie McMains, Sabine Kastner

16.508 **The effect of microstimulation of LIP during a change blindness task** Fabrice Arcizet, Caroline Charpentier, James Bisley

16.509 **Surprises are mistakes: An EEG source localization study of prediction errors** Abigail Noyce, Robert Sekuler

16.510 **An analytic assessment of the effects of dietary iron repletion on perceptual and cognitive performance** Michael Wenger, Laura Murray-Kolb, Julie Hammons, Sudha Venkatramanan, Jere Haas

16.511 **Neural responses involved in adaptation-induced blindness** Kaoru Amano, Toshimasa Takahashi, Tsunehiro Takeda, Isamu Motoyoshi

16.512 **Parietal laterality effects in visual information processing during object individuation and identification** Su Keun Jeong, Yaoda Xu

16.513 **Implicit processing of features connects shape, motion, and color brain regions** Quoc C Vuong, Katja M Mayer

16.514 **A combined structural MRI and tractography approach in visuospatial neglect** Monica Narcisa Toba, Raffaella Migliaccio, Michel Thiebaut de Schotten, Pascale Pradat-Diehl, Catherine Loeper-Jeny, Paolo Bartolomeo

16.515 **Response modulation in visual cortex by task, stimulus, and spatial attention** Erik Runeson, Scott Murray, Geoffrey Boynton

16.516 **Subthreshold microstimulation of the superior colliculus induces pupil dilation** Chin-An Wang, Susan Boehnke, Brian White, Douglas Munoz

16.517 **Neural activity in V1 creates the saliency map** Xilin Zhang, Li Zhaoping, Fang Fang

Attention: Inattention and attention blindness

Poster Session, Vista Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.518 **Change Detection: Training and Transfer** John Gaspar, Mark Neider, Daniel Simons, Jasson McCarley, Arthur Kramer

16.519 **No Gist Perception Without Attention** Jason Clarke, Arien Mack, Clarissa Slesar, Muge Erol

16.520 **Unconscious pop-out: attentional capture by unseen feature singletons only when top-down attention is available** Po-Jang Hsieh, Jaron Colas, Nancy Kanwisher

16.521 **Negative Choice in Inattentional Blindness** Maria Kuvaldina

16.522 **Prior perceptual decisions drive subsequent perceptual experience: Negative priming increases inattentional blindness** Steven B. Most, Maria Kuvaldina, Kyle Dobson, Briana L. Kennedy

16.523 **The effects of attentional capture on the target-present and target-absent trials in change blindness** Takuma MURAKOSHI, Yoshihisa OSADA

16.524 **Temporal processing units relocate the attentional blink.** Viatcheslav Stepanov, Maria Falikman

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16.525 **Implicit semantic perception in object substitution masking** Stephanie C. Goodhew, Troy A.W. Visser, Ottmar V. Lipp, Paul E. Dux

Color and light: Lightness and brightness

Poster Session, Vista Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.526 **A low-level multiscale filtering account of stimuli often cited as evidence for higher-level mechanisms in brightness perception** Barbara Blakeslee, Mark E. McCourt

16.527 **Brightness-related responses in V1 and V2, a computational model** Bo Cao, Arash Yazdanbakhsh, Ennio Mingolla

16.528 **Gamut Expansion as a Function of Articulation** Stephen Ivory, Ana Radonjic, Alan Gilchrist

16.529 **Simultaneous contrast of brightness and color for flashed stimuli** Sae Kaneko, Ikuya Murakami

16.530 **A fuzzy-edged region is perceived as differing in reflectance on textured backgrounds** Masataka Sawayama, Eiji Kimura

16.531 **Size makes a difference: Estimating lightness and luminance contrast with real light** James Schirillo, Matthew Riddle, Rumi Tokunaga

16.532 **Dichoptic presentation of the contrast asynchrony suggests a retinal locus for the contrast response** Arthur Shapiro, Erica Dixon, Sean Burn

16.533 **Binocular Fusion Unmasks Rivalrous Suppression of the Craik-O'Brien-Cornsweet (COC) Illusion** Steven Shevell, Elizabeth Allen, Stuart Anstis

16.534 **Lightness constancy in visual artists** Daniel Graham, Ming Meng

16.535 **Biological computations underlying grouping-by-similarity in lightness perception** Michael E. Rudd

16.536 **Highlight disparity, surface curvature and perceived gloss.** Iona S. Kerrigan, Wendy J. Adams, Erich W. Graf, Aaron Shuai Chang

Perceptual learning: Plasticity and adaptation

Poster Session, Vista Ballroom

Friday, May 6, 6:45 - 9:30 pm

16.537 **Separate mechanisms for long- and short-term contrast adaptation.** Min Bao, Stephen Engel

16.538 **The Eye-direction Aftereffect shows complete interocular transfer and is not retinocentric.** Lawrence Symons, Rory Weston, Scott Olin

16.539 **Effect of blur adaptation on contrast discrimination in emmetropes and myopes** Humza Tahir, Jianliang Tong, Christopher Cantor, Clifton Schor

16.540 **Figural Chasers** Patricia Winkler, Kyle C McDermott, Gideon Caplovitz, Michael Webster

16.541 **Examining the effects of stroboscopic vision** Julia Schroeder, L. Gregory Appelbaum, Matthew Cain, Stephen Mitroff

16.542 **Improvement in Stereoacuity through Training with Correlated Cues** Cristina Llerena Law, Benjamin Backus, Baptiste Caziot

16.543 **Effects of meditation on consolidation of perceptual learning** Erika Scilipoti, Takeo Watanabe

16.544 **Perceptual learning solely induced by feedback** Hoon Choi, Takeo Watanabe

16.545 **Effects of Visual Deprivation on Regional Cerebral Blood Flow Velocity and Neurovascular Coupling** Keith Brewster, Jon Smirl, Karen Bourns, Francisco Colino, Phil Ainslie, Gord Binsted

16.546 **Two perceptual consequences of orientation discrimination learning and their distinct time courses** Nihong Chen, Fang Fang

Saturday Morning Talks

Color and light: Surfaces and materials

Talk Session, Royal Palm 1-3
Saturday, May 7, 8:00 - 9:45 am
Moderator: Anya Hurlbert

8:00 am 21.11 **At what level of representation is surface gloss computed?** Barton L. Anderson, Juno Kim, Phillip Marlow

8:15 am 21.12 **Luminance-color interactions in surface gloss perception** Shin'ya Nishida, Isamu Motoyoshi, Kazushi Maruya

8:30 am 21.13 **Shape modulates the effect of lightfield on perceived glossiness** Maria Olkkonen, David Brainard

8:45 am 21.14 **3D surface shape and the appearance of glow** Minjung Kim, Richard F. Murray

9:00 am 21.15 **The intrinsic colour of transparent materials** Roland Fleming, Max Wolff

9:15 am 21.16 **The effect of shape and chromatic texture diagnosticity on color discrimination of natural objects** Milena Vurro, Anya Hurlbert

9:30 am 21.17 **Material recognition is fast, but not superfast.** Edward Adelson, Lavanya Sharan, Ruth Rosenholtz

Spatial vision: Crowding

Talk Session, Royal Palm 1-3
Saturday, May 7, 10:45 - 12:30 pm
Moderator: Susana Chung

10:45 am 22.11 **No evidence for compulsory integration in visual crowding** Edward Ester, Daniel Klee, Edward Awh

11:00 am 22.12 **Changes in crowding zone at the eccentric retinal loci of subjects with simulated central scotoma** MiYoung Kwon, Anirvan S. Nandy, Bosco S. Tjan

11:15 am 22.13 **Target and flanker perception are related in crowded letter identification** Jean-Baptiste Bernard, Daniel Coates, Susana Chung

11:30 am 22.14 **Crowding reveals a third stage of object recognition** Sarah Rosen, Ramakrishna Chakravarthi, Denis G. Pelli

11:45 am 22.15 **Temporal Dynamics of the Crowding Mechanism** Susana Chung, Saumil Patel

12:00 pm 22.16 **Extraction of semantic information from unidentifiable, crowded words** Su-Ling Yeh, Sheng He, Patrick Cavanagh

12:15 pm 22.17 **Music-reading expertise alters visual spatial resolution for musical notation** Yetta Kwailing Wong, Isabel Gauthier

Attention: Features and objects

Talk Session, Royal Palm 4-5
Saturday, May 7, 8:00 - 9:45 am
Moderator: Miranda Scolari

8:00 am 21.21 **Individual differences in object-based attention effects in discrimination and detection tasks** Karin S. Pilz, Alexa B. Roggeveen, Sarah E. Creighton, Patrick J. Bennett, Allison B. Sekuler

8:15 am 21.22 **The speed of intentional control over bistable apparent motion** Julia Mossbridge, Marcia Grabowecky, Satoru Suzuki

8:30 am 21.23 **Testing the flexibility of top-down attentional gain in early visual cortex.** Miranda Scolari, John Serences

8:45 am 21.24 **Feature-based attention enhances performance by increasing response gain** Katrin Herrmann, David J. Heeger, Marisa Carrasco

9:00 am 21.25 **Different attentional strategies are reflected by modulations in the feature tuned flicker response** David Bridwell, Elizabeth Hecker, Ramesh Srinivasan

9:15 am 21.26 **Feature-based enhancement of visual stimuli at task-irrelevant locations** David Painter, Susan Travis, Paul Dux, Jason Mattingley

9:30 am 21.27 **Understanding the Allocation of Attention when Faced with Varying Perceptual Load in Partial Report: A Computational Approach** Søren Kyllingsbæk, Jocelyn L. Sy, Barry Giesbrecht

Perceptual learning: Transfer and specificity

Talk Session, Royal Palm 4-5
Saturday, May 7, 10:45 - 12:30 pm
Moderator: Michael Herzog

10:45 am 22.21 **Aging, perceptual learning, and perceptual efficiency in motion processing** Jeffrey D. Bower, George J. Andersen

11:00 am 22.22 **Non-retinotopic perceptual learning** Michael Herzog, Thomas Otto, Haluk Ögmen

11:15 am 22.23 **Aging and Perceptual Learning in Orientation Discrimination** Denton J. DeLoss, George J. Andersen

11:30 am 22.24 **What is learned in perceptual learning of the classical texture discrimination task?** Rui Wang, Lin-Juan Cong, Cong Yu

11:45 am 22.25 **The specificity of perceptual learning of pop-out detection depends on the difficulty during post-test rather than training** Jordan Meyer, Alexander Petrov

12:00 pm 22.26 **Perceptual learning transfers to untrained retinal locations after double training: A piggyback effect** Jun-Yun Zhang, Rui Wang, Stanley Klein, Dennis Levi, Cong Yu

12:15 pm 22.27 **Training Older Adults to Improve Their Contrast Sensitivity: A Possible or Impossible Task?** Mikki Phan, Rui Ni

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Saturday Morning Posters

Eye movements: Saccades and fixations

Poster Session, Royal Palm 6-8

Saturday, May 7, 8:15 am - 12:15 pm

23.301 **Interaction between Sensory- and Goal-related Neuronal Signals on Saccade Trajectories in the Monkey** Brian White, Jan Theeuwes, Douglas Munoz

23.302 **Investigating the role of intra-collicular excitatory connections in the generation of vertical saccades: A Human behavioural study.** Soazig Casteau, Françoise Vitu

23.303 **Oculomotor integration in patients with a pulvinar lesion** Stefan van der Stigchel, Isabel Arend, Martijn G. van Koningsbruggen, Robert D. Rafal

23.304 **Distinctive Features of Saccadic Intrusions and Microsaccades in Progressive Supranuclear Palsy** Jorge Otero-Millan, Alessandro Serra, R. John Leigh, Xoana G. Troncoso, Stephen L. Macknik, Susana Martinez-Conde

23.305 **Topography of saccadic eye movement representations in human superior colliculus** Sucharit Katyal, Clint Greene, Manoj Kapoor, David Ress

23.306 **Deciphering the relationship between perceptual and motor variability** Dorion Liston, Leland Stone

23.307 **The antisaccade task: dissociating stimulus and response influences online saccade control** Matthew Heath, Jeffrey Weiler, Kendal Marriott, Timothy Welsh

23.308 **Distinct Response Latencies do not Influence Pro- and Antisaccade Trajectories** Jeffrey Weiler, Scott Holmes, Ali Mulla, Matthew Heath

23.309 **Reliability and sensitivity of anti saccade in a block versus mixed paradigm** Alan Chauvin, Nathalie Guyader, Marie-Nathalie Braun, Boris Quetard, Marendaz Christian

23.310 **Word Processing Speed in Peripheral Vision** Myriam Chanceaux, Françoise Vitu, Luisa Bendahman, Simon Thorpe, Jonathan Grainger

23.311 **Saccades to color: an ultra-fast controllable mechanism to low-level features** Adrien Brilhault, Marie A. Mathey, Nelly Jolmes, Sébastien M. Crouzet, Simon J. Thorpe

23.312 **Eye And Hand Coordination: Comparing Effects Of Age On Performance** Claudia Gonzalez, Mark Mon-Williams, Melanie Burke

23.313 **Development of Coordinated Eye and Head Movements during Gaze Shifts** Sohrab Saeb, Cornelius Weber, Jochen Triesch

23.314 **Eye movements during and after automatization of a high-speed stacking task: From sensory-based to memory-based saccadic programming** Rebecca Foerster, Elena Carbone, Hendrik Koesling, Werner Schneider

23.315 **Effect of task and behavioral demands on saccadic targeting** Rachael Harms, Laura Renninger

23.316 **Absence of an extraretinal signal associated with ocular drift affects saccade accuracy** Martina Poletti, Michele Rucci

23.317 **Eye movements when viewing oriented noisy textures** Dagmar Wismeijer, Karl Gegenfurtner

23.318 **Predicting the responses of retinal ganglion cells during fixational eye movements** Xutao Kuang, Antonino Casile, Michele Rucci

23.319 **Analysis of individual variability in fixational eye movements** Claudia Cherici, Martina Poletti, Michele Rucci

23.320 **Non-uniform vision within the fovea might explain microsaccade production** Chiara Listorti, Martina Poletti, Michele Rucci

Visual search: Eye movements

Poster Session, Royal Palm 6-8

Saturday, May 7, 8:15 am - 12:15 pm

23.321 **Guidance during Visual Search in Real-World Scenes: Scene Context vs. Object Content** Effie Pereira, Monica Castelhano

23.322 **Searching for target parts** Robert Alexander, Gregory Zelinsky

23.323 **The odd human eye movements during oddity search are not suboptimal** Sheng Zhang, Stephen Mack, Miguel Eckstein

23.324 **Examining Eye Movements in Visual Search through Clusters of Objects in a Circular Array** Carrick Williams, Alexander Pollatsek, Erik Reichle

23.325 **Coarse-to-Fine Search Strategy when Searching in Clutter** Melissa R. Beck, Maura C. Lohrenz

23.326 **The effect of temporal distance on comparative visual search** Vera Bauhoff, Markus Huff, Stephan Schwan

23.327 **Eye movement patterns underlying robustness against item motion in visual search** Angela H Young, Johan Hulleman

23.328 **Measuring the stare-in-the-crowd effect using eye-tracking: Effects of task demands** Adam Palanica, Roxane Itier

23.329 **Effective Attentional Filtering By The Union Of Two Distinct Colors: Eye-Tracking Evidence** Mark W. Becker, Reem Alzahabi, Sara Jelinek

Binocular vision: Binocular combination and rivalry

Poster Session, Orchid Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.401 **Transition between stereopsis and binocular rivalry is based on perceived, rather than physical, orientation** Adrien Chopin, Pascal Mamassian, Randolph Blake

23.402 **Characterizing mixed percepts during binocular rivalry** Alexandra List, Marcia Grabowecky, Satoru Suzuki

23.403 **Dichoptic completion, rather than binocular rivalry or binocular summation** Gao Meng, Xiaomeng Zhang, Li Zhaoping

23.404 **Temporal Dynamics of Binocular Rivalry at the Blind Spot** Yihwa Baek, Oakyoon Cha, Sang Chul Chong

23.405 **Binocular functional architecture for detection of luminance- and contrast-modulated gratings** Mark Georgeson, Andrew Schofield

23.406 **Adaptation to interocular differences in blur** Elysse Kompaniez, Adam Dye, Lucie Sawides, Susana Marcos, Michael Webster

23.407 **The time course of hemispheric asymmetries in perceptual selection of spatial frequency information** Elise Piazza, Michael Silver

23.408 **Unmixing binocular signals** Sidney Lehky

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23.409 **Binocular rivalry between spiral space stimuli in human observers: Expanding stimuli dominates over contraction and rotation.** Nour Malek, Julio Martinez-Trujillo

23.410 **The effect of interocular delays on the perception of 3D movies** Zoltan Nadasdy, Barna Kantor

23.411 **Perceptual misbinding of color and motion induced by modulative effects of preceding stimuli on binocular rivalry** Eiji Kimura, Satoru Abe, Ken Goryo

23.412 **Predictive context biases perceptual selection during binocular rivalry** Rachel Denison, Elise Piazza, Michael Silver

3D perception: Contours, shading and texture

Poster Session, Orchid Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.413 **Interpreting line drawings of smooth shapes** Forrester Cole, Fredo Durand, Bill Freeman, Edward Adelson

23.414 **The perception of 3D shape from contour textures** Eric J L Egan, James T Todd, Flip Phillips

23.415 **Analysis of the combination of frequency and orientation cues in texture 3D shape perception.** Corentin Massot

23.416 **Position selectivity of mechanisms underlying the perception of 3D shape from orientation flows** Carole Filangieri, Andrea Li

23.417 **Face priors overcome shape-from-motion signals in the rotating hollow face illusion** Thomas Papathomas, Jordan Ash, James Hughes, Brian Keane, Qasim Zaidi

23.418 **Classification images reveal lighting prior for shape-from-shading** Giacomo Mazzilli, Andrew J Schofield

23.419 **Shape from contours constrains shape from shading** Dejan Todorovic

23.420 **Grouping modulates contextual biases in 3D perception** Katinka van der Kooij, Susan te Pas

23.421 **Symmetry facilitates 3D shape discrimination across changes in viewpoint** Jeffrey Saunders, Young Lee

23.422 **Recovering a 3D shape from a single 2D image of a generalized cone** Yun Shi, Tadamasa Sawada, Yunfeng Li, Zygmunt Pizlo

23.423 **Neon Color Spreading to Two Dimensional Manifolds and Three Dimensional Solids** Elizabeth Seckel, Abigail E. Huang, Xintong Li, Alice J. Hon, V.S. Ramachandran, Eric L. Altschuler

Attention: Tracking

Poster Session, Orchid Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.424 **When vision loses its "grip" on tracked objects: Lessons from studying gaze-to-item dynamics** Deborah Aks, Lorilei Alley, Veena Rathakrishnan, Hristiyan Kourtev, Harry Haladjian, Zenon Pylyshyn

23.425 **Tracking objects and tracking our eyes during disrupted viewing** Lorilei Alley, Veena Rathakrishnan, Courtney Harman, Hristiyan Kourtev, Allan Kuegel, Harry Haladjian, Deborah Aks, Zenon Pylyshyn

23.426 **Close encounters of the distracting kind: Explaining the limits of visual object tracking** Gi Yeul Bae, Jonathan Flombaum

23.427 **Center-looking suggests grouping rather than separate attentional foci in multiple object tracking** Christina L. Blaxton, Hilda M. Fehd, Adriane E. Seiffert

23.428 **Eye-movement dynamics of object-tracking.** Omar Elfanagely, Harry Haladjian, Deborah Aks, Hristiyan Kourtev, Pylyshyn Zenon

23.429 **The effect of speed on multiple object tracking: Is it due solely to the number of close target-distractor interactions?** Cary Feria

23.430 **In multiple object tracking, at high speeds one may only be able to track a single target—even if no crowding occurs** Alex Holcombe, Wei-Ying Chen

23.431 **How the imprecision of spatial knowledge constrains multiple object tracking** Matthew Levine, Gi Yeul Bae, Jonathan Flombaum

23.432 **Multiple object tracking, working memory capacity, and motivation** Nathan Medeiros-Ward, Janelle Seegmiller, Jason Watson, David Strayer

23.433 **Visually guided self-motion does not impair multiple object-tracking** Nicole L Jardine, Laura E Thomas, Adriane E Seiffert

23.434 **Cross-attribute object trackings are much slower than within-attribute trackings** Hidetoshi Kanaya, Takao Sato

23.435 **Automatic feature-based grouping during multiple object tracking** Everett Mettler, Brian Keane, Genna Erlikhman, Todd Horowitz, Philip Kellman

23.436 **Trained Older Observers are Equivalent to Untrained Young Adults for 3d Multiple-object-tracking Speed Thresholds** Isabelle Legault, Remy Allard, Jocelyn Faubert

23.437 **Asymmetric attention foci during multiple object tracking: Evidence from distractor displacements** Hauke S. Meyerhoff, Frank Papenmeier, Georg Jahn, Markus Huff

23.438 **Quantification of the self-motion load on multiple object tracking: How many objects are you worth?** Adriane E. Seiffert, Laura Thomas

23.439 **Misrepresentation of motion direction causes prediction errors in multiple object tracking** Rebecca St. Clair, Adriane E. Seiffert

23.440 **Expanding Attentional Capacity with Adaptive Training on a Multiple Object Tracking Task** Todd W. Thompson, Micheal L. Waskom, John D. E. Gabrieli, George A. Alvarez

23.441 **iMOT: interactive Multiple Object Tracking** Ian M. Thornton, Todd S. Horowitz, Heinrich H. Bülthoff

Visual memory: Encoding and retrieval

Poster Session, Orchid Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.442 **Individual Differences in Visual Cognitive Abilities** Eve Ayeroff, George Alvarez

23.443 **Effects of updating visuo-spatial working memory in early visual cortex** Jaap Munneke, Artem Belopolsky, Jan Theeuwes

23.444 **Spike count correlations between primate dorsolateral prefrontal cortex neurons during a spatial working memory task** Julio Martinez-Trujillo, Matthew Leavitt, Megan Schneiderman

23.445 **Short-term visual recall is preserved in aging** Jie Huang, Allison B. Sekuler, Patrick J. Bennett, Robert Sekuler

23.446 **Training Improves Stability of VWM Representations** Lisa Blalock, Benjamin Clegg

23.447 **Retrieval-induced Perceptual Suppression: Selective retrieval of mental images can result in perceptual deterioration of non-retrieved images.** Jihyun Cha, Eunah Joo, Kyung Bo Seo, Su Hyoun Park

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23.448 **Resolution of Representations in Spatially Cued Attention and Visual Working Memory: A Multi-Alternative Perceptual Template Decision Model** Wilson Chu, Barbara Dosher, Ryan Najima, Zhong-Lin Lu

23.449 **Efficient Detection of a Supra-threshold Change Revealed by Pattern-backward Masking** Ji-Eun Han, Joo-Seok Hyun

23.450 **The neural processes underlying memory encoding and retrieval of own-race and other-race faces** Grit Herzmann, Verena Willenbockel, James T. Tanaka, Tim Curran

23.451 **Visual search for a feature-absence target among to-be-remembered items can compete for attentional resources for VWM consolidation** Dae-Gyu Kim, Joo-Seok Hyun

23.452 **Visual short term memory also gates long term memory without explicit retrieval** Keisuke Fukuda, Edward K. Vogel

23.453 **The capacity of encoding into visual short-term memory** Irida Mance, Mark Becker, Taosheng Liu

23.454 **Electrophysiological Measures of Visual Grouping on Working Memory Representations** Andrew McCollough, Edward Vogel

23.455 **Multiple Spatial Frequency Channels in Human Visual Perceptual Memory** Vanda Nemes, David Whitaker, James Heron, Declan McKeefry

23.456 **Learning statistical regularities can speed the encoding of information into working memory** Juliana Rhee, Talia Konkle, Timothy Brady, George Alvarez

23.457 **Two Object Subliminal Priming** Clarissa Slesar, Arien Mack, Jason Clarke, Muge Erol

Motion: Biological motion

Poster Session, Vista Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.501 **The perception of animacy in humans and squirrel monkeys (Saimili sciureus)** Takeshi Atsumi, Yasuo Nagasaka, Yoshihisa Osada

23.502 **Integration of form and motion for biological motion displays in the monkey** Jan Jastorff, Ivo Popivanov, Hauke Kolster, Rufin Vogels, Wim Vanduffel, Guy Orban

23.503 **How does the brain identify living things based on their motion?** Johannes Schultz, Heinrich Bülthoff

23.504 **A New Action Library for Localising Brain Activity Specific to Biological Motion** Frank Pollick, William Steel, Haodan Tan, Lukasz Piwek, Frances Crabbe, Ulf Ahlstrom

23.505 **Depth cues in point-light biological motion** Marc HE de Lussanet, Markus Lappe

23.506 **Before, During and After You Disappear: Aspects of timing and dynamic updating of the real-time action simulation of human motions** Jim Parkinson, Wolfgang Prinz

23.507 **A test battery for assessing biological motion perception** Daniel R. Saunders, Nikolaus F. Troje

23.508 **Structural Neural Correlates of Biological Motion Detection Ability** Sharon Gilaie-Dotan, Ryota Kanai, Bahador Bahrami, Geraint Rees, Ayse P. Saygin

23.509 **Determining the feature sensitivity of visual areas to biological motion using brain-based reverse correlation** Steven Thurman, Javier Garcia, Emily Grossman

23.510 **Neuronal Encoding of movement kinematics during action observation: a TMS study.** Sara Agosta, Lorella Battelli, Antonino Casile

23.511 **Animated character appearance does not affect judgments of motion trajectory** Lavanya Sharan, Matthew Kaemmerer, Moshe Mahler, Kwang Won Sok, Jessica Hodgins

23.512 **Adapting to male or female faces induce gender aftereffect in point-light walkers** Xiaoying Yang, Sheng He, Yi Jiang

23.513 **Bootstrapping a prior? Effects of experience on the facing bias in biological motion perception** Nikolaus Troje, Morgan Davis

23.514 **Footstep sounds increase sensitivity to point-light walking when visual cues are weak.** James Thomas, Maggie Shiffrar

23.515 **Search asymmetry in perceiving walkers: Inversion effect and biological motion stimuli** Kazuya Ono, Takao Sato, Michiteru Kitazaki

23.516 **Listening to footsteps modulates invisible biological motion processing** Yi Jiang, Li Wang

23.517 **Beat them to the punch: Rapid recognition of boxers among walkers with a "punch detector"** Jeroen van Boxtel, Hongjing Lu

23.518 **Anticipating The Actions Of Others: Do Goalkeepers Use Local or Distributed Information?** Gabriel Diaz, Brett Fajen, Flip Phillips

Face perception: Wholes and parts

Poster Session, Vista Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.519 **Identification of similar faces in the peripheral visual field** Wei Song Ong, James W Bisley

23.520 **Face Recognition as a Function of Image Resolution and Viewing Distance** Ainsley Braun, Izzat Jarudi, Pawan Sinha

23.521 **Recognizing Facial Slivers** Sharon Gilad-Gutnick, Elia Samuel Harmatz, Galit Yovel, Pawan Sinha

23.522 **Why are face composites difficult to recognize?** William Hayward, Kate Crookes, Simone Favelle, Gillian Rhodes

23.523 **It is easier to remember two faces than a single one** Corrado Caudek, Fulvio Domini

23.524 **Holistic processing for own-, other- and mixed-race faces is modulated by awareness of race category.** Rachel Robbins, Dilan Perera

23.525 **Contextual grouping cues modulate holistic face perception** Kim M. Curby

23.526 **The Effect of Changing External Features on the Recognition of Headscarf-Wearing Faces** M Umar Toseeb, David R T Keeble, Eleanor J Bryant

23.527 **The role of featural and configural information for perceived similarity between faces** Janina Esins, Isabelle Bülthoff, Johannes Schultz

23.528 **Priming global and local processing of composite faces: Revisiting the processing-bias effect on face perception** Zaifeng Gao, Anastasia Flevaris, Lynn Robertson, Shlomo Bentin

23.529 **A dynamic photorealistic average avatar - separating form and motion** Harry Griffin, Peter McOwan, Alan Johnston

23.530 **Relative Independence of Face and Body Posture Processing** Catherine Reed, Matthew Garber

23.531 **Local Processing in the Navon Task Slows Face Gender Discrimination** James Thompson, Elisabeth Ploran, Christopher Williams

23.532 **Eye Movement in Face Change Detection Task** Buyun Xu, James Tanaka

23.533 **The effect of perceptual expertise on visual short-term memory** wei zhang, William Hayward

Face perception: Disorders

Poster Session, Vista Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.534 **Holistic face perception impairment in acquired prosopagnosia as evidenced by eye-gaze-contingency: generalization to several cases** Goedele Van Belle, Thomas Busigny, Anthony Hosein, Boutheina Jemel, Philippe Lefèvre, Bruno Rossion

23.535 **Holistic processing of unfamiliar faces during social judgments in acquired prosopagnosia** Susanne Quadflieg, Alexander Todorov, Bruno Rossion

23.536 **Developmental Prosopagnosia: A childhood case study** Jordan Mathison, Sherryse Corrow, Michelle Platt, Kelly King, Richard Ziegler, Garga Chatterjee, Ken Nakayama, Albert Yonas

23.537 **Abnormal adaptive coding of identity in congenital prosopagnosia** Romina Palermo, Davide Rivolta, C. Ellie Wilson, Linda Jeffery

23.538 **The right anterior temporal lobe variant of prosopagnosia** Raika Pancaroglu, Thomas Busigny, Samantha Johnston, Alla Sekunova, Bradley Duchaine, Jason JS Barton

23.539 **Acquired prosopagnosia with spared within-class object recognition but impaired recognition of degraded basic-level objects** Brad Duchaine, Constantin Rezlescu, David Pitcher, Nicole Whitty

23.540 **Ensemble Encoding in Congenital Prosopagnosia** Allison Yamanashi Leib, Amrita Puri, Shlomo Bentin , David Whitney, Lynn Robertson

23.541 **Psychophysical and Neural Investigations of Congenital Prosopagnosia** Nathan Witthoft, Sonia Poltoratski, Mai Nguyen, Golijeh Golarai, Alina Liberman, Kalanit Grill-Spector

23.542 **An Online Investigation of Face Training in a Large Sample of Developmental Prosopagnosics, Phase 1** Sarah Cohan, Joseph M. DeGutis, Ken Nakayama

23.543 **Holistic processing of face gender in developmental prosopagnosia** Garga Chatterjee, Joseph M. DeGutis, Rogelio Mercado, Ken Nakayama

23.544 **Eying the eyes in social scenes: Diminished importance of social attention in simultanagnosia** Kirsten Dalrymple, Alex Gray, Brielle Perler, Elina Birmingham, Walter Bischof, Jason Barton, Alan Kingstone

23.545 **Posterior Cortical Atrophy: The role of Simultanagnosia in deficits of Face Perception.** Jonathan Marotta, Keri Locheed

Perception and action: Pointing and hitting

Poster Session, Vista Ballroom

Saturday, May 7, 8:15 am - 12:15 pm

23.546 **Compressing Perceived Distance Through Real and Imagined Tool Use** Christopher Davoli, James Brockmole, Jessica Witt

23.547 **Pointing accurately at a target doesn't require perceiving its location accurately** Vy Vo, Annie Ning, Amlan Bhattacharjee, Zhi Li, Frank Durgin

23.548 **Vision at high limb velocities: The importance of visual feedback for online control at high limb velocities early in a movement.** Andrew Kennedy, Luc Tremblay

23.549 **Eye-hand coordination in rapid, goal directed movements** Anna Ma-Wyatt, Laura Renninger

23.550 **Distance-to-contact and not time-to-contact determines when a hitting movement is initiated** Cristina de la Malla, Joan López-Moliner

23.551 **Preventing falls in older adults: understanding postural instability under increasing visual-motor demands** Anna Rossiter, Elizabeth Brierley, Rebecca Lawton, Richard Wilkie, Mark Mon-Williams

23.552 **Humans alter their priors by using information from their recent past** Devika Narain, Robert J. van Beers, Jeroen B.J. Smeets, Eli Brenner

23.553 **Misattribution of unconscious visuo-motor conflict to preferential decision** Kazuhisa Shibata, Takeo Watanabe

23.554 **When perceptual- and cognitive decisions are excellent - mostly.** Andreas Jarvstad, Simon K. Rushton, Paul A. Warren, Ulrike Hahn

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Saturday Afternoon Talks

Development: Infancy and childhood

Talk Session, Royal Ballroom 1-3

Saturday, May 7, 2:30 - 4:15 pm

Moderator: Melanie Palomares

2:30 pm 24.11 **Reciprocal structural relationship between primary sensory and prefrontal cortices in the human brain** Chen Song, Dietrich Schwarzkopf, Ryota Kanai, Geraint Rees

2:45 pm 24.12 **Locating 'dorsal stream vulnerability': high-density global motion and form coherence VEPs related to MRI in infants born very preterm** Janette Atkinson, Dee Birtles, Shirley Anker, John Wattam-Bell, Mary Rutherford, Frances Cowan, David Edwards, Michela Groppo, Oliver Braddick

3:00 pm 24.13 **Protracted Development of Texture-defined Figure/Ground Segmentation: A High-Density ssVEP Study** Anthony Norcia, Justin Ales, Melanie Palomares

3:15 pm 24.14 **The interaction between chunking and stimulus complexity in infant visual statistical learning** Kimberly J. MacKenzie, Richard N. Aslin, Jozsef Fiser

3:30 pm 24.15 **Face- and object-selective cortical responses in 4- to 6-month-old infants and adults.** Faraz Farzin, Chuan Hou, Melanie Palomares, Bruno Rossion, Anthony Norcia

3:45 pm 24.16 **On the development of human face-processing abilities: Evidence for hyperactivation of the extended face system in children** Frank Haist, Maha Adamo, Jarnet Han, Kang Lee, Joan Stiles

4:00 pm 24.17 **Development of Visual-Motor Integration: The Role of Genetic & Environmental Factors** Karin Stromswold, Michelle Rosenthal, Kruti Patel, Diane Molnar

Perception and action: Navigation and locomotion

Talk Session, Royal Ballroom 1-3

Saturday, May 7, 5:15 - 6:45 pm, Moderator: Simon Rushton

5:15 pm 25.11 **The relationship between perceived straight-ahead and walking direction.** Tracey A. Herlihey, Simon K. Rushton, Cyril Charron

5:30 pm 25.12 **Rapid recruitment of extra-visual information supports heading control when visual feedback is unavailable** Steven Cloete, Guy Wallis

5:45 pm 25.13 **Visual and non-visual contributions to the perception of object motion during self-motion** Brett Fajen, Jonathan Matthis

6:00 pm 25.14 **Gazing at tangent point location during curve driving does not avoid foveal motion and leads to optokinetic nystagmus.** Colas Authié, Daniel Mestre

6:15 pm 25.15 **Distinct neural networks underlie encoding of categorical versus coordinate spatial relations during active navigation** Oliver Baumann, Edgar Chan, Jason B Mattingley

6:30 pm 25.16 **A new neural framework for visuospatial processing** Dwight Kravitz, Kadharbatcha Saleem, Chris Baker, Mortimer Mishkin

Eye movements: Remapping

Talk Session, Royal Ballroom 4-5

Saturday, May 7, 2:30 - 4:15 pm

Moderator: Martin Rolfs

2:30 pm 24.21 **Spatiotemporal remapping during saccades revealed by classification images analysis.** Michela Panichi, Concetta Morrone, David Burr, Stefano Baldassi

2:45 pm 24.22 **How transient "remapping" of neuronal receptive fields mediates perceptual stability** David Burr, Marco Cicchini, Paola Binda, Concetta Morrone

3:00 pm 24.23 **Saccade target visible on landing despite removal: Can human observers see the prediction generated by presaccadic remapping?** Camille Morvan, Heiner Deubel, Patrick Cavanagh

3:15 pm 24.24 **Mapping of presaccadic receptive field profiles in the macaque frontal eye field** Marc Zirnsak, Kitty Z. Xu, Behrad Noudoost, Tirin Moore

3:30 pm 24.25 **Saccadic adaptation fields have a visual component anchored in spatiotopic coordinates** Eckart Zimmermann, David C. Burr, M. Concetta Morrone

3:45 pm 24.26 **Visual attention in the pre-saccadic interval** Sebastiaan Mathôt, Jan Theeuwes

4:00 pm 24.27 **Saccades gradually increase the perceived contrast of their targets** Martin Rolfs, Marisa Carrasco

Object recognition: Parts and categories

Talk Session, Royal Ballroom 4-5

Saturday, May 7, 5:15 - 6:45 pm

Moderator: James Tanaka

5:15 pm 25.21 **Poselets: A distributed representation for visual recognition** Lubomir Bourdev, Subhransu Maji, Jitendra Malik

5:30 pm 25.22 **View propagation in internal object memory representation** Tandra Ghose, Zili Liu

5:45 pm 25.23 **Gaze Direction Representations in Human Superior Temporal Sulcus are Invariant to Head View** Johan D Carlin, Andrew J Calder, Nikolaus Kriegeskorte, Hamed Nili, James B Rowe

6:00 pm 25.24 **Recognizing objects, faces, and flowers using fixations** Christopher Kanan, Garrison Cottrell

6:15 pm 25.25 **The Number Sense Follows the Object Sense** Lixia He, Tiangang Zhou, Jun Zhang, Yan Zhuo, Lin Chen

6:30 pm 25.26 **The neural correlates of self-identity: Own-face and own-object effects in event-related potentials** James Tanaka, Lara Pierce, Lisa Scott, Tim Curran

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Saturday Afternoon Posters

Color and light: Adaptation and constancy

Poster Session, Royal Palm 6-8

Saturday, May 7, 2:45 - 6:30 pm

26.301 **The strength of the McCollough effect does not increase linearly with saturation: implications for the cortical color code** Alan Robinson, Donald MacLeod

26.302 **An ecologically valid description of the light field** Sylvia Pont

26.303 **Where we look determines what we see** Matteo Toscani, Matteo Valsecchi, Karl Gegenfurtner

26.304 **People can reliably detect surfaces that are unlikely to just be reflecting light** Sérgio Nascimento, Eli Brenner

26.305 **Co-occurrence of luminance and chromatic edges does not always result in suppressed perception of depth from shading** Stephane Clery, Marina Bloj, Julie M. Harris

26.306 **Do basic colors influence chromatic adaptation?** C. Alejandro Parraga, Jordi Roca-Vila, Maria Vanrell

26.307 **Optimizing lighting spectra for naturalness and chromatic diversity** Osamu Masuda, João Linhares, Paulo Felgueiras, Sérgio Nascimento

26.308 **The neural basis of lightness and color constancy in the visual system** Peter J. Kohler, Sergey V. Fogelson, Eric A. Reavis, Peter U. Tse

26.309 **Dichoptic positive color aftereffect induced by contour figure: a new color aftereffect** Takao Sato, Yutaka Nakajima

26.310 **Filling-in of an Afterimage in Depth Planes** Jihyun Kim, Gregory Francis

26.311 **Effects of binocular disparity on color constancy in real 3D scenes revealed with a synopter** Kazuho Fukuda, Takahiro Fukase, Keiji Uchikawa

26.312 **The effect of Color-Luminance correlations in surrounding stimuli on color constancy under interocular suppression** Koji Horiuchi, Ichiro Kuriki, Rumi Tokunaga, Kazumichi Matsumiya, Satoshi Shioiri

26.313 **Visual perception of material affordances** Martin Giesel, Qasim Zaidi

26.314 **Near-optimal tuning of trichromatic vision for constant surface identification in natural scenes** David H Foster, Sérgio M C Nascimento, Kinjiro Amano, Iván Marín-Franch

26.315 **A model of induced visual fading of complex images** Gregory Francis, Jihyun Kim

26.316 **Red/Green Color Naming Declines in the Periphery. "Blue"/"Yellow" Does Not. What Happens in Visual Search?** Karen L. Gunther, Rob Dalhaus, III

26.317 **Detecting animals in natural surroundings: The role of color distributions.** Michael Jansen, Martin Giesel, Qasim Zaidi

26.318 **Hue perception under scotopic light levels** Sarah Elliott, Dingcai Cao

26.319 **Hyperspectral one-dimensional visual stimulator and its application of metameric test.** Toshifumi Mihashi, Naoki Nakamura, Keisuke Yoshida, Tatsuo Yamaguchi, Kazuho Fukuda, Yasuki Yamauchi, Katsuaki Sakata, Keiji Uchikawa

26.320 **Scotopic sensitivity regulation: noise or gain ?** Adam Reeves, Rebecca Grayhem

Multisensory processing: Visual, tactile and vestibular interactions

Poster Session, Royal Palm 6-8

Saturday, May 7, 2:45 - 6:30 pm

26.321 **A multisensory visuotactile illusion induced by monocular occlusion with a black contact lens does not depend on touch signals on the face: evidence from behavioural and modelling studies.** Joseph DeSouza, Aaron Kucyi, Laura Pynn, Cecilia Jobst, Paula Di Noto, Gerry Keith, Uta Wolfe

26.322 **Different tactile stimuli produce different activation patterns in occipitotemporal cortex** Tingting Liu, Sheng He, Peng Zhang, Gordon Legge

26.323 **Recognition of Tactile Pictures is Compromised by Global Shape Acquisition** Amy Kalia, Pawan Sinha

26.324 **Direct and indirect haptic calibration of visual size judgments in adults and children** Monica Gori, Alessandra Sciutti, David Burr, Giulio Sandini

26.325 **Curvature aftereffect and visual-haptic interactions in simulated environments** Melissa M. Kibbe, Sung-Ho Kim, Steven Cholewiak, Kristina Denisova

26.326 **Optimal visual and proprioceptive cue integration in motion perception** Bo Hu, Grayson Sipe, David Knill

26.327 **Visual smooth pursuit of proprioceptive signals is enhanced by task-irrelevant dynamic noise** Kevin C. Dieter, Bo Hu, David C. Knill, Duje Tadin

26.328 **The psychophysics of phantom sensations evoked by Ramachandran's mirror: temporal dynamics and individual differences explored using the phantom pulse effect in normal (non-amputee) observers.** David Peterzell

26.329 **A New Method To Induce Phantom Limbs** Beatrix Krause, Elizabeth Seckel, Claude Miller, V.S. Ramachandran

26.330 **Self-produced stimulation can elicit rubber hand illusion** Kazuhiko Yokosawa, Shoko Kanaya, Takahiro Ishiwata

26.332 **Perceived direction of self-motion from upward/downward vestibular and orthogonally directed visual stimulation** Kenzo Sakurai, Toshio Kubodera, Philip Grove, Shuichi Sakamoto, Yôiti Suzuki

26.333 **A Model for the Enhancement and Multi-Modal Integration of Multi-Spectral Information in Rattlesnake** Vincent Billock, Brian Tsou

Perceptual organization: Contours and surfaces

Poster Session, Orchid Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.401 **Functional organizations underlying illusory and kinetic contour processing in early visual cortices V1 and V2 of macaques** Xu An, Yanxia Pan, Jiapeng Yin, Xian Zhang, Hongliang Gong, Yupeng Yang, Wei Wang

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26.402 **Contour complexity and contour detectability** John Wilder, Jacob Feldman, Manish Singh

26.403 **Interpretation of surfaces as revealed by object motion behind occluders** Sung-Ho Kim, Jacob Feldman, Manish Singh

26.404 **Spatiotemporal Contour Interpolation in Four Dimensions** Gennady Erlikhman, Tandra Ghose, Philip Kellman

26.405 **Achromatic surface color depends on filling in shape** Brian Keane, Steven Silverstein, Philip Kellman

26.406 **Selective mechanisms for relative phase demonstrated by compound adaptation** Rebecca Sharman, Jonathan W. Peirce

26.407 **Response priming by illusory contours** Thomas Schmidt, Anna Seydell

26.408 **Contextual Modulation of Contour Detection is Altered in Schizophrenia** Michael-Paul Schallmo, Scott Sponheim, Cheryl Olman

26.409 **The contribution of colour and spatial frequency cues to contour integration** Malte Persike, Günter Meinhardt

26.410 **Closing the Gap: Sensitivity to Real and Illusory Contours in Patients treated for Bilateral Congenital Cataracts** Mohini N. Patel, Bat-Sheva Hadad, Daphne Maurer, Terri L. Lewis

26.411 **Functional organizations underlying illusory and kinetic contour processing in extrastriate visual cortex V4d of macaques** Yanxia Pan, Xu An, Jiapeng Yin, Xian Zhang, Hongliang Gong, Yupeng Yang, Wei Wang

26.412 **Probe detection reveals a border-to-interior scheme for perceiving a grating-texture surface** Teng Leng Ooi, Yong R. Su, Zijiang J. He

26.413 **Transilience Induced Blindness** Makoto Katsumura, Ryo Shohara, Seiichiro Naito

26.414 **Selectivity for contrast polarity in contour integration revealed by a novel tilt illusion** Stefano Guidi, Sergio Roncato, Oronzo Parlangeli

26.415 **Neural Correlates of the Poggendorff Illusion driven by Illusory Contour: an fMRI Study** Qi Chen, Li Li, Lihui Wang

26.416 **Lazy neurons for good shape - Neural energy minimization models for perceptual curve completion** Ohad Ben-Shahar, Guy Ben-Yosef

26.417 **How the unseen informs us about the seen: Metacontrast masking with texture-defined second-order stimuli** Evelina Tapia, Bruno Breitmeyer, Jane Jacob

26.418 **Spatial Range of Contour Integration in Schizophrenia** Steven M Silverstein, Brian P Keane, Deanna Barch, Cameron Carter, Jim Gold, Ilona Kovács, Angus MacDonald III, Dan Ragland, Milton Strauss

26.419 **Selective Filling-in of Large Artificial Scotoma** Ryo Shohara, Makoto Katsumura, Seiichiro Naito

Attention: Endogenous and exogenous

Poster Session, Orchid Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.420 **Exogenous cue size modulates attentional effects** Katherine Burnett, Giovanni d'Avossa, Ayelet Sapir

26.421 **Differential effects of endogenous and exogenous attention on second-order contrast sensitivity** Antoine Barbot, Michael S. Landy, Marisa Carrasco

26.422 **Exogenous cuing improves perceptual performance** Michael Druker, Britt Anderson

26.423 **Involuntary attention improves perception by resolving competition** Suk Won Han, René Marois

26.424 **Voluntary attention modulates motion-induced mislocalization** Peter Tse, David Whitney, Stuart Anstis, Patrick Cavanagh

26.425 **Temporal Expectancy, Framing Effects, and the Modulation of Inhibition of Return** Janice J. Snyder, Victoria Holec

26.426 **Voluntary production of visual items modulates transient attention twice** Ken Kihara, Jun Kawahara

26.427 **What Stimulus Attributes are Enhanced by Attention?** William Prinzmetal, Ariel Rokem, Michael Silver

26.428 **Top-Down And Bottom-Up Modulation Of Retinotopic Activity In Temporal And Parietal Cortex** Burcu A. Urgen, Donald J. Hagler Jr, Jon Driver, Ayse P. Saygin

26.429 **The time course of saccadic visual selection in patients with parietal damage.** Isabel Dombrowe, Mieke Donk, Hayley Wright, Cristian NL Olivers, Glyn Humphreys

26.430 **Ramped Target Presentation Increases the Magnitude of Location-Based Inhibition of Return** Benjamin A. Guenther, James M. Brown, Aisha P. Siddiqui, Shruti Narang

26.431 **Spatial memory increases fixations to targets and onsets in a visual search task** Matthew Peterson, Jason Wong

26.432 **Sustaining visual attention in the face of distraction: A novel gradual onset continuous performance task** Monica Rosenberg, Sarah Noonan, Joseph DeGutis, Michael Esterman

Attention: Features and objects

Poster Session, Orchid Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.433 **Cross Modal Object-Based Attentional Guidance** Emily Bilger, Sarah Shomstein

26.434 **Feature-based Selection Differs from Spatial Selection in Visual Working Memory** Qi Li, Jun Saiki

26.435 **Rapid and reflexive feature-based attention** Jeffrey Lin, Bjorn Hubert-Wallander, Scott Murray, Geoffrey Boynton

26.436 **Global modulation of task-relevant and task-irrelevant dimensions of attended objects** Audrey G. Lustig, Diane M. Beck

26.437 **Chroma and luminance interactions in processing of orientation saliency** Alik Mokeichev, Ohad Ben-Shahar

26.438 **Object-based attention: Shifting or uncertainty, reconsidered** W. Trammell Neill, George Seror, Yongna Li

26.439 **Object representations maintain attentional control settings across space and time** Christian Olivers, Daniel Schreij

26.440 **Unitising colour and shape: The effects of stored knowledge on visual selection** Sarah J. Rappaport, Glyn W. Humphreys, M. Jane Riddoch

26.441 **Object based attention effects disappear when flanking objects are present.** Brian Roller, Andrew, J. Mojica, Elizabeth Salvagio, Mary A. Peterson

26.442 **The roles of visual features in the generation of the contextual cuing effect** Joseph Krummenacher, Alain Chavaillaz

26.443 **Contextual effect in object-based attention when target is integral to the object** Yun Ji Kim, Jihyun Cha, Eunah Joo, Kyung Bo Seo, Su Hyoun Park

26.444 **The role of attentional gradients in line bisection performance of hemineglect** Parampal S Grewal, Jayalakshmi Viswanathan, Jason JS Barton

26.445 **Sustained attention facilitates change detection, but only in a brief blank duration** Ryoichi Nakashima, Kazuhiko Yokosawa

26.446 **Relation binding deficits during rapid spatial relationship judgments.** Heeyoung Choo, Steve Franconeri

26.447 **An Investigation of the Reliability and Relationships among Global-Local Processing Measures** Gillian Dale, Karen M. Arnell

26.448 **Object-based Attention and Prioritization Revealed by the Temporal Order Judgment Method** Ian Donovan, Jay Pratt, Sarah Shomstein

26.449 **Saliency affects feedforward more than feedback processing in primary visual cortex.** Tatiana Aloi Emmanouil, Philip Avigan, Marjan Persuh, Tony Ro

26.450 **Perceptual consequences of feature-based attentional suppression** Tiffany Ho, Scott Brown, John Serences

26.451 **Object-based attention: spreading or prioritization?** Sien Hu, Alissa Winkler, Chiang-shan Li, Yuan-chi Tseng

26.452 **Change Detection is Better Specifically for Object Properties that Change More Frequently in the Real World** Stephen Killingsworth, Alex Franklin, Daniel Levin

26.453 **The simultaneous and involuntary effect of global feature-based attention on motion sensitivity** Alex White, Marisa Carrasco

Noise and uncertainty

Poster Session, Vista Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.501 **Separating Decision Noise and Encoding Noise in Perceptual Decision Making** Carlos Cabrera, Zhong-Lin Lu, Barbara Dosher

26.502 **Learning of uncertain stimuli transfers from criterion-based to noise-based perceptual decision, but not vice versa** Feitong Yang, Sheng Li

26.503 **Uncertainty representation of low-level visual attributes** Marjena Popovic, Dmitriy Lisitsyn, Pietro Berkes, Máté Lengyel, József Fiser

26.504 **Internal uncertainty, rather than expected performance, determines visual confidence** Pascal Mamassian, Simon Barthelmé

26.505 **Ventral lateral prefrontal areas reflect an influence of past experiences of weak signals on perceptual decision making** Shigeaki Nishina, Dongho Kim, Kazuhisa Shibata, Ji-Won Bang, Gojko Zaric, José Náñez, Yuka Sasaki, Takeo Watanabe

26.506 **A strong interactive link between sensory discrimination and intelligence** Michael Melnick, Duje Tadin

26.507 **Action selection requires predicting future uncertainty** C. Shawn Green, Jacqueline Fulvio, Max Siegel, Daniel Kersten, Paul Schrater

26.508 **Overcoming uncertainty aversion with visual lotteries.** Riccardo Pedersini

Motion: Neural mechanisms

Poster Session, Vista Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.509 **The motion after-effect in the optomotor response of zebrafish** Hiroshi Ishikane

26.510 **An augmented Barlow–Levick model detects onsets and offsets of motion** Timothy Barnes, Ennio Mingolla

26.511 **Temporal integration and interaction in the mechanisms underlying orientation- and direction-specific VEP** Oliver Braddick, Thomas Bloomfield, Oliver Wright, Janette Atkinson, John Wattam-Bell, Jin Lee

26.512 **Retinal and cortical effects of transcranial electric stimulation** Kohitij Kar, Bart Krekelberg

26.513 **Intermittent motion stimuli stabilize neuronal responses in area MT: Implications for the perceptual stabilization of visual ambiguities** Chris Klink, Martin Lankheet, Richard van Wezel

26.514 **Image velocity coding in the primate visual system: A possible role for MT component neurons** John A. Perrone, Richard J. Krauzlis

26.515 **Multivariate classification of motion direction using high-field fMRI.** Alex Beckett, Jonathan Peirce, Susan Francis, Denis Schluppeck

26.516 **Decoding perceptual choices for motion stimuli of varying coherence** Martin N. Hebart, Tobias H. Donner, John-Dylan Haynes

26.517 **Illusory centrifugal motion direction observed in stationary stimuli: dependency on duration and eccentricity** Ruyuan Zhang, Duje Tadin

26.518 **Resolving the projection of a moving stimulus on the human cortical surface** Kevin DeSimone, Keith Schneider

26.519 **Visual trails : when perceptual continuity breaks down** Julien Dubois, Christof Koch, Rufin VanRullen

26.520 **The critical speed for motion streak processing in early visual cortex** Zhongchao Tan, Haidong Lu

Spatial vision: Mechanisms

Poster Session, Vista Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.521 **The Psychometric Function: Why we should not, and need not, estimate the lapse rate.** Nicolaas Prins

26.522 **The interaction between flanker phase and position in lateral masking** Chien-Chung Chen

26.523 **Spatial frequency bandwidth of surround suppression** Ignacio Serrano-Pedraza, John P. Grady, Jenny C.A. Read

26.524 **Bandwidths of gain control pools in overlaid and center-surround masking** Lynn Olzak, Patrick Hibbeler

26.525 **Efficient integration across spatial frequencies reflected in early visual areas** Rachel Millin, Bosco S. Tjan

26.526 **Time-Course of Anisotropic Masking at High and Low Spatial Frequencies** Yeon Jin Kim, Andrew M. Haun, Edward A. Essock

26.527 **The effect of mask contrast on spatiotemporal masking in younger and older subjects** Lindsay E. Farber, Allison B. Sekuler, Patrick J. Bennett

26.528 **Alignment judgements: Greater precision within than between cortical maps** Rachel Owens, J. Edwin Dickinson, David.R. Badcock

26.529 **Temporal characteristics of monoptic and dichoptic collinear lateral masking of contrast detection** Wesley Kinerk, Erwin Wong

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26.530 **Bisection and dissection of horizontal lines: the long and the short of the Oppel-Kundt illusion.** Kyriaki Mikellidou, Peter Thompson

26.531 **When bigger is better** Mauro Manassi, Bilge Sayim, Michael H. Herzog

26.532 **Jitter detection exceeds spatial frequency limit of the visual system** Koichiro Shinohara, Kazuho Fukuda, Keiji Uchikawa

26.533 **Reduced adaptation from complex grating on component grating is due to automatic interaction between components independent of attention** Qiujie Weng, Stephen Engel, Daniel Kersten, Sheng He

26.534 **Ecological-optics origin of the style of European and East-Asian classical painting** Isamu Motoyoshi

26.535 **Dioptric blur affects grating acuity more than letter acuity for contrast-modulated stimuli.** Norsham Ahmad, Sarah J Waugh, Monika A Formankiewicz

Spatial vision: Encoding and decoding

Poster Session, Vista Ballroom

Saturday, May 7, 2:45 - 6:30 pm

26.536 **Segmentation mechanisms are sensitive to and can segment by higher-order statistics in naturalistic textures** Elizabeth Arsenault, Curtis Baker

26.537 **Spatial Frequency Weighting Functions for Perceived Contrast in Complex Imagery** Andrew Haun, Eli Peli

26.538 **Statistics of natural scene structures and material perception** Almon Ing, Zhiyong Yang

26.539 **Orientation statistics of natural scenes: spatial-scale and temporal aspects** Anirvan S. Nandy, John H. Reynolds, Tatyana O. Sharpee

26.540 **Anisotropy in Paintings: A reflection of structural anisotropy in natural scenes?** April M. Schweinhart, Yeon Jin Kim, Edward A. Essock

26.541 **Characterizing the salience and interactions of informative image statistics** Jonathan Victor, Daniel Thengone, Mary Conte

26.542 **A neural population model for pattern detection** Robbe Goris, Tom Putzeys, Johan Wagemans, Felix Wichmann

26.543 **Decoding cortico-cortical receptive fields: Background signal fluctuations in the visual system are retinotopically coordinated between different visual areas** John-Dylan Haynes, Thorsten Kahnt, Jakob Heinzle

26.544 **Spatial saturation in human visual cortex** Kendrick Kay, Jonathan Winawer, Aviv Mezer, Brian Wandell

26.545 **ERP correlates of orientation-specific surround suppression** Michael Silver, Anna Kosovicheva, Ayelet Landau

26.546 **Does the BOLD signal reflect input or output of a cortical area? -- Laminar patterns of Gamma-band activities in Macaque visual cortex** Dajun Xing, Chun-I Yeh, Samuel Burns, Robert Shapley

26.547 **How receptive field properties of V1 neurons change with different stimulus ensembles** Chun-I Yeh, Dajun Xing, Robert M Shapley

26.548 **Estimating the growth of discriminative information guiding perceptual decisions** Casimir Ludwig, Rhys Davies

26.549 **Contrast-response functions, Fisher information, and contrast decoding performance** Keith May, Li Zhaoping

26.550 **Psychophysical evidence for normalization in second-order mechanisms** Helena X. Wang, Michael S. Landy, David J. Heeger

26.551 **A Neural Model of Figure-Ground Segregation Explains Occlusion Without Junction Detectors** Arash Yazdanbakhsh, Oliver Layton, Ennio Mingolla

Sunday Morning Talks

Motion: Encoding and aftereffects

Talk Session, Royal Ballroom 1-3
Sunday, May 8, 8:00 - 9:45 am
Moderator: Hinze Hogenboom

8:00 am 31.11 **Large illusory displacements of spots flashed on a moving object.** Stuart Anstis, Patrick Cavanagh

8:15 am 31.12 **Optimal signal integration across spatiotemporal frequency channels accounts for perceived visual speed** Matjaz Jogan, Alan A. Stocker

8:30 am 31.13 **The motion-induced position shift of a Gabor patch with a moving carrier and a moving envelope viewed with a moving eye** Rumi Hisakata, Masahiko Terao, Ikuya Murakami

8:45 am 31.14 **Decoding the motion aftereffect in human visual cortex** Hinze Hogendoorn, Frans A.J. Verstraten

9:00 am 31.15 **A new form of motion aftereffect in transparent motion adaptation** Alan L. F. Lee, Hongjing Lu

9:15 am 31.16 **Motion integration across apertures generates a global motion aftereffect in an unadapted region** Zhicheng Lin, Sheng He

9:30 am 31.17 **What is the spatial integration area for global motion perception in human central vision?** Timothy Ledgeway, Paul McGraw, Anita Simmers

Object recognition: Features

Talk Session, Royal Ballroom 4-5
Sunday, May 8, 8:00 - 9:45 am
Moderator: Gabriel Kreiman

8:00 am 31.21 **The medial axis structures of novel objects are spontaneously perceived despite variability in the objects' orientations and component part shapes** Mark D Lescroart, Irving Biederman

8:15 am 31.22 **What determines the canonical view of a scene?** Krista Ehinger, Aude Oliva

8:30 am 31.23 **Segmenting 2D Shapes using 3D Inflation** Nathaniel R. Twarog, Edward H. Adelson, Marshall F. Tappen

8:45 am 31.24 **Can configural relations be encoded by image histograms of higher-order filters?** Nicholas M. Van Horn, Alexander A. Petrov, James T. Todd

9:00 am 31.25 **Binding the features of a continuously changing visual stimulus** Para Kang, Steven Shevell

9:15 am 31.26 **Top-down signals are needed for object completion in the human visual cortex** Gabriel Kreiman, Calin Buia, Jed Singer, Joseph Madsen

9:30 am 31.27 **Binding of text and speech by children** Katharine A. Tillman, Matthieu Dubois, Wendy Schnebelen, Denis G. Pelli

Multisensory processing

Talk Session, Royal Ballroom 1-3
Sunday, May 8, 10:45 - 12:30 pm
Moderator: Thomas Otto

10:45 am 32.11 **Multimodal integration for estimating event rates** Paul Schrater, Anne Churchland

11:00 am 32.12 **Interactive processing of auditory amplitude-modulation frequency and visual spatial frequency.** Emmanuel Guzman-Martinez, Laura Ortega, Marcia Grabowecky, Julia Mossbridge, Satoru Suzuki

11:15 am 32.13 **Differential development of audio-visual integration for saccadic eye movements and manual responses** Marko Nardini, Jennifer Bales, Samir Zughni, Denis Mareschal

11:30 am 32.14 **Noise and Correlations in Parallel Perceptual Decision Making** Thomas U. Otto, Pascal Mamassian

11:45 am 32.15 **Text and speech summate perfectly, despite inefficient feature binding** Matthieu Dubois, David Poeppel, Denis G. Pelli

12:00 pm 32.16 **Striking parallel between Tonotopy in Auditory Cortex and Retinotopy in Visual Cortex: a human fMRI study at 7 Tesla** Melissa Saenz, Wietske Van Der Zwaag, Jose P Marques, Richard S Frackowiak, Stephanie Clarke, Sandra E Da Costa

12:15 pm 32.17 **Decoding natural sounds in early visual cortex** Petra Vetter, Fraser W. Smith, Lars Muckli

Attention: Neural mechanisms and reward

Talk Session, Royal Ballroom 4-5
Sunday, May 8, 10:45 - 12:30 pm
Moderator: Yuka Sasaki

10:45 am 32.21 **Superior colliculus inactivation impairs covert selective attention to motion but does not alter gain modulation of motion signals in areas MT and MST** Richard Krauzlis, Alexandre Zenon

11:00 am 32.22 **On the limits of top-down control of visual selection** Jan Theeuwes, Erik van der Burg

11:15 am 32.23 **Early involvement of prefrontal cortex in bottom-up visual attention: comparison of neural response times in monkey prefrontal and posterior parietal cortex** Fumi Katsuki, Christos Constantinidis

11:30 am 32.24 **Detection performance is modulated at a low-theta selection rhythm.** Ayelet Landau, Pascal Fries

11:45 am 32.25 **Visual information processing in the absence of pulvinar input** Gopathy Purushothaman, Roan Marion, Steven Walston, Keji Li, Dmitry Yampolsky, Yaoguang Jiang, Vivien Casagrande

12:00 pm 32.26 **Using MVPA to dissociate the role of object-centered and eye-centered reference frames in attention** Alejandro Vicente-Grabovetsky, Daniel, J. Mitchell, Johan D. Carlin, Rhodri Cusack

12:15 pm 32.27 **Reward reduces inhibitory control as shown in retrieval-induced forgetting** Hisato Imai, Dongho Kim, Yuka Sasaki, Takeo Watanabe

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Sunday Morning Posters

Eye movements: Perisaccadic perception

Poster Session, Royal Palm 6-8

Sunday, May 8, 8:15 am - 12:15 pm

33.301 **Peri-Saccadic Visual Sensitivity while Freely-Viewing Natural Movies** Michael Dorr, Peter Bex

33.302 **Egocentric but not allocentric perceptual distortions from saccadic adaptation** Benjamin Wolfe, David Whitney

33.303 **The role of surface feature information in object persistence across saccades** Caglar Tas, Cathleen Moore, Andrew Hollingworth

33.304 **Saccadic decisions in response to new objects in spatiotopic and retinotopic reference frames** Rhys Davies, Casimir Ludwig

33.305 **Binding of location and color in retinotopic, not spatiotopic, coordinates** Sarah Tower-Richardi, Julie Golomb, Nancy Kanwisher

33.306 **Breakdown of spatial constancy for head roll but not head translation.** Martin Szinte, Stéphanie Correia, Patrick Cavanagh

33.307 **Computational mechanisms of predictive remapping and visual stability** Fred H Hamker, Arnold Ziesche

33.308 **Fidelity of spatial memory across eye movements: Retinotopic memory is more precise than spatiotopic memory** Julie Golomb, Nancy Kanwisher

33.309 **Perisaccadic flash mislocalization depends on whether a background stimulus appears or disappears around the time of the flash** Jordan Pola

33.310 **How perisaccadic spatial distortion affects on crowding effect?** Zhi-Lei Zhang, Christopher Cantor, Jian-Liang Tong, Clifton Schor

Development: Childhood and infancy

Poster Session, Royal Palm 6-8

Sunday, May 8, 8:15 am - 12:15 pm

33.311 **Optical Development in Early Childhood: Results From Non-Cycloplegic Autorefraction** Russell J. Adams, Jesse Church, James R Drover, Mary L. Courage

33.312 **Unlike Adults, Infants' Visual Preferences are Driven by Lower-Level Visual Features** Lauren Burakowski, Edward Vessel, Scott Johnson, Lauren Krogh

33.313 **Feature Processing and Illusory Conjunctions in Infants' Long-Term Memory** Scott Adler, Joanna Dudek

33.314 **Quick CSF in preverbal infants with forced-choice preferential looking paradigm** Geroldene Hoi-Tung Tsui, Doris Hiu-Mei Chow, Chia-huei Tseng

33.315 **Four-month-old infants exhibit lightness constancy** Carl Granrud, Sherryse Corrow, Alan Gilchrest, Jordan Mathison, Albert Yonas

33.316 **Denoising developmental FMRI data: Removal of structured noise from a passive-viewing task differentially impacts children and adults** Maha Adamo, Jarnet Han, Frank Haist

33.317 **Development of visual motion processing: Latency of direction-specific VEP in infants compared to adults** Jin Lee, Dee Birtles, John Wattam-Bell, Janette Atkinson, Oliver Braddick

33.318 **The development of sensitivity to the direction of motion** Lisa Betts, Daphne Maurer, Terri Lewis

33.319 **Depth from motion parallax in infancy: The role of smooth pursuit and ocular following response eye movements** Elizabeth Nawrot, Mark Nawrot, Jennifer Livingood, Jennifer Wenner

33.320 **Infants' ability to perceive depth produced by vertical disparity** Aki Tsuruhara, Hirohiko Kaneko, So Kanazawa, Yumiko Otsuka, Nobu Shirai, Masami K. Yamaguchi

33.321 **Developmental trends in detection threshold for looming objects** Damian Poulter, Catherine Purcell, John Wann

33.322 **Six- to 12-month-old infants use emotional response, agent identity, and motion cues in associated learning of social events** Doris Hiu-Mei Chow, Geroldene Hoi-Tung Tsui, Chia-huei Tseng

33.323 **Development of visual sensitivity for topological versus geometric properties in early infancy** Sarina Hui-Lin Chien, Yun-Lan Lin, Lin Chen

Development: Amblyopia

Poster Session, Royal Palm 6-8

Sunday, May 8, 8:15 am - 12:15 pm

33.324 **Cortical thickening of early visual areas in early monocular enucleation** Krista Kelly, Kevin DeSimone, Keith Schneider, Jennifer Steeves

33.325 **Is tonic vergence protective against strabismus during development?** Erin E. Babinsky, T. Rowan Candy

33.326 **Links between acuity, crowding and binocularity in children with and without amblyopia** John Greenwood, Vijay Tailor, Anita Simmers, John Sloper, Gary Rubin, Peter Bex, Steven Dakin

33.327 **Temporal Dynamics of Binocular Rivalry in Normal and Amblyopic Vision** Chang-Bing Huang, Jiawei Zhou, Yifeng Zhou, Zhong-Lin Lu

33.328 **The Effect of Early Visual Deprivation on Sensitivity to Orientation in First- and Second-order Patterns** Seong Taek Jeon, Daphne Maurer, Terri Lewis

33.329 **Prolonged periods of binocular stimulation can provide an effective treatment in childhood amblyopia** Anita Simmers, Pamela Knox, Lyle Gray

33.330 **Examination of Anti-Suppression Therapy for Amblyopia** Andrea K. Globa, Behzad Mansouri, Pauline M. Pearson

33.331 **Quantitative measurement of interocular suppression in children with amblyopia** Sathyasri Narasimhan, Emily Harrison, Deborah Giaschi

33.332 **Improving the screening of children for amblyopia** Denis Pelli, Shuang Song, Dennis Levi

Face perception: Expression and emotion

Poster Session, Orchid Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.401 **Aftereffects for contrast-negated faces in gender and emotion categorization** Pamela Pallett, Ming Meng

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33.402 **Happy or Sad? Context Does Not Influence Four-Year-Olds' Perception of Happy and Sad Facial Expressions** Matt Horner, Cathy Mondloch, Jasmine Mian

33.403 **Event Related Potentials Associated With The Modulation Of Spatial Attention By Emotional Faces.** Amandine Lassalle, Roxane Itier

33.404 **Neural Coding of Facial Emotions in the Human Brain** Fraser Smith, Melvyn Goodale

33.405 **Effects of attentional load and spatial location on amygdala processing of emotional stimuli** Daniel Stjepanovic, Jason Mattingley, Mark Bellgrove

33.406 **Online interaction between conscious and non-conscious perception of emotions in "affective blindsight" depends on low spatial frequencies** Marco Tamietto, Tommaso Brischetto Costa, Beatrice de Gelder

33.407 **Redundancy Effects in the Processing of Emotional Faces** Bo-Yeong Won, Yuhong Jiang

33.408 **Orientation Information in Encoding Facial Expressions** Deyue Yu, Andrea Chai, Susana Chung

33.409 **Uncovering the principles that allow a distinction of conversational facial expressions** Kathrin Kaulard, Ana Lucia Fernandez Cruz, Heinrich H. Bülthoff, Johannes Schultz

33.410 **A computational feed-forward model predicts categorization of masked emotional body language for longer, but not for shorter latencies** Bernard Stienen, Konrad Schindler, Beatrice de Gelder

Face perception: Experience and learning

Poster Session, Orchid Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.411 **Do face adaptation aftereffects predict face recognition? Evidence from individual differences** Hugh W. Dennett, Elinor McKone, Mark Edwards, Tirta Susilo

33.412 **Evidence opposing opponent facial coding** Anjali Diamond, Derek Arnold

33.413 **Adaptation modulates the electrophysiological substrates of perceived facial distortion: Support for opponent coding** Bethany Jurs, Alex Burkhardt, Leslie Blaha, Gillian Rhodes, Linda Jeffery, Tom Busey

33.414 **Facial age after-effects show partial identity invariance and transfer from hands to faces.** Michelle Lai, Ipek Oruc, Jason J S Barton

33.415 **Adaptation for perception of the human body: investigations of transfer across viewpoint and pose.** Alla Sekunova, Michael Black, Laura Parkinson , Jason Barton

33.416 **Face adaptation: Comparing norm-based and exemplar-based models** David Ross, Mickael Deroche, Thomas Palmeri

33.417 **Selectivity of facial aftereffects for changes in facial expression** Megan Tillman, Michael Webster

33.418 **Contrast dependence of figural aftereffects for faces** Kimberley Halen, Michael Webster

33.419 **Perceptual learning induces fast processing and efficient representation of face** Fang Fang, Junzhu Su, Cheng Chen, Dongjun He

33.420 **Perceptual Learning of Inverted Faces across Different Spatial Frequency Bands** Adélaïde de Heering, Daphne Maurer

33.421 **Implicit face prototype learning from geometric information** Charles C.-F. Or, Hugh R. Wilson

33.422 **Visual familiarity influences representations of faces** Lucia Garrido, Jonathan S. Cant, Yaoda Xu, Ken Nakayama

33.423 **The time course of individual face processing** Gladys Barragan-Jason, Fanny Lachat, Emmanuel Barbeau

33.424 **Beyond the retina: Evidence for a face inversion effect in the environmental reference frame** Stephen Flusberg, Nicolas Davidenko

33.425 **Identifying faces across large changes in illumination: Human versus machine performance** Alice O'Toole, Jonathan Phillips, Joseph Dunlop, Xiaobo An, Samuel Weimer, Vaidehi Natu

33.426 **Using avatars to explore height/pitch effects when learning new faces** Isabelle Bülthoff, Sarah Shrimpton, Betty J. Mohler, Ian M. Thornton

33.427 **Avatars versus point-light faces: Movement matching is better without a face.** Rachel Bennetts, Rachel Robbins, Darren Burke, Kevin Brooks, Jeesun Kim, Simon Lucey, Jason Saragih

Perception and action: Reaching and grasping

Poster Session, Orchid Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.428 **A perception-action dissociation revealed through the interaction with blurred stimuli.** Frank Colino, John de Grosbois, Darian Cheng, Keith Brewster, Gord Binsted

33.429 **Passive tracking versus active control in motor learning** Geoffrey P. Bingham, Elizabeth Casserly, Winona Snapp-Childs

33.430 **Visuomotor resolution for size is independent of conscious perception** Tzvi Ganel, Erez Freud, Eran Chazut, Daneil Algom

33.431 **A Modern Version of a Classic: Combining the Cross Copy Task with a Computerized Tablet Reveals Subtle Motoric Deficits in Hemispatial Neglect** Joseph M. DeGutis, Tyler Zink, Regina McGlinchey, William Milberg, Ken Nakayama

33.432 **The role of right temporal lobe structures in off-line action: evidence from lesion-behaviour mapping in stroke patients** Monika Harvey, Stephanie Rossit

33.433 **The role of proprioception in the planning and control of action following sensory deprivation** Karen Bourns, Franciso Colino, Keith Brewster, Gordon Binsted

33.434 **Dynamic early adherence and late violation of Weber's law in goal-directed grasping.** Scott Holmes, Ali Mulla, Lisa Smuskowitz, Matthew Heath

33.435 **Walking, climbing, grasping: Separate visual processing streams for different classes of actions** Rouhollah Abdollahi, Jan Jastorff , Guy Orban

33.436 **Gaze strategies during visually-guided and memory-guided grasping** Steven L. Prime, Jonathan J. Marotta

33.437 **Perception and the Fitts's Law Violation: Why is the last one the fastest one?** Petre Radulescu, Jos Adam, Martin Fisher, Davood Gozli, Greg West, Jay Pratt

33.438 **Spatial bias, spatial uncertainty and illusion effects in antigrasping** Urs Kleinholdermann, Volker H. Franz

33.439 **Error statistics reflect movement coding and prior movement history** Michael Landy, Todd Hudson

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33.440 **Cognitive feedback may cause "Tool Effects": An attempted replication of Witt (in press)** Zachary Ontiveros, Neil Mejia, Peter Liebenson, Andreas Lagos, Frank Durgin

33.441 **Metric visual information about distance entails informational units** Jing Samantha Pan, Rachel Coats, Geoffrey Bingham

33.442 **Intrinsic scaling of reaches-to-grasp predicted by affordance-based model: Testing men and women with large and small grip spans** Winona Snapp-Childs, Rachel Coats, Jing Samantha Pan, Mark Mon-Williams, Geoffrey P. Bingham

33.443 **Learning to stop looking at the task in hand** Robyn Johnson, Richard Wilkie, Melanie Burke, Mark Mon-Williams

33.444 **The Poggendorff Illusion Fools Perceptions and Various Actions** Larence Becker

Scene perception: Memory and context

Poster Session, Orchid Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.445 **Decoding objects undergoing contextual violations** Christopher Baldassano, Marius Cătălin Iordan, Diane M. Beck, Li Fei-Fei

33.446 **Scene categorization after priming/adaptation to amplitude statistics** Jenny A.E. Josephs, Erich W. Graf, Wendy J. Adams

33.447 **Contextual associations facilitate long-term memory of visual details in barely seen pictures** Nurit Gronau, Meytal Shachar, Yifat Rosenberg

33.448 **Reducing expectations: Is an extension of current boundary extension theories needed?** Aisha Siddiqui, James Brown, Ben Guenther, Shruti Narang

33.449 **Event Extension: Event Based Inferences Distort Memory in a Matter of Seconds** Brent Strickland, Frank Keil

33.450 **More Space Please! The effect of clutter on Boundary Extension** Carmela Gottesman

33.451 **Threat is separable from stimulus negativity in visual scenes** Kestutis Kveraga, Jasmine Boshyan, Reginald Adams, Moshe Bar, Jasmine Mote, Lisa Feldman Barrett

33.452 **The Impact of Scrambling the Order of Episode Components on Perceived Events and Recognition Memory for a Picture Story** Adam Larson, Chris Wallace, Margarita McQuade, Caitlyn Badke, Lester Loschky

33.453 **The effect of consistency on scene short-term memory** Mingliang Gong, Yuming Xuan, Xiaolan Fu

33.454 **Object Orientation Influences False Memory for the Shape of a View** Christopher Dickinson, David Crane, J. Chapman Munn, Reiss Powell, Leah Stephens, Jordan Todd

33.455 **Visual Long-Term Memory of Scenes is Vulnerable to Bubbles** Hengqing Chu, Eamon Caddigan, Diane M. Beck

33.456 **What is the speed of visual recognition memory?** Gabriel Besson, Mathieu Ceccaldi, Mira Didic-Hamel Cooke, Emmanuel Barbeau

33.457 **Mental representation of compositions in paintings is based on their perceptual similarities** Woon Ju Park, Sang Chul Chong

33.458 **Integration without awareness: expanding the limits of unconscious processing** Liad Mudrik, Assaf Breska, Dominique Lamy, Leon Deouell

Attention: Capture

Poster Session, Vista Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.501 **On The Precision of Attention Sets: Effects of Distractor Probability and Temporal Expectations on Contingent Capture** Daniel Blakely, Timothy Wright, Walter Boot, James Brockmole

33.502 **Is attentional capture modulated by task difficulty? An N2pc study with visual search of repeated and changing targets** Nicolas Burra, Dirk Kerzel

33.503 **The effect of context on oculomotor capture: It's better not to think about it** Joseph Chisholm, Alan Kingstone

33.504 **Capturing attention without onset transients** Fook K Chua

33.505 **Contingent attentional capture depends on stimulus properties** Hsin-I Liao, Su-Ling Yeh

33.506 **Motion refresh rates determine how continuous and starting motion captures attention** Meera Mary Sunny, Adrian von Muhlenen

33.507 **Does Hand Position Affect Attentional Capture by a Salient Distracter?** Dan Vatterott, Shaun Vecera

33.508 **Attentional Capture and Aging: Increased Salience** Sarah Weiss, Sarah Shomstein

33.509 **The Time Course and Nature of Attentional Disengagement Effects** Walter Boot, Timothy Wright, Daniel Blakely, James Brockmole

33.510 **Active suppression of attention after the completion of perception** Risa Sawaki, Joy Geng, Steven Luck

33.511 **Objects approaching your avatar engage attention** Daniel Schreij, Chris Olivers

33.512 **Effects of involuntary covert orienting and attentional control settings depend on the experimental task** Josef Schönhammer, Dirk Kerzel

33.513 **Attentional Set Produces an Inhibitory Surround in Color Space** Erika Wells, Andrew Leber, Erin Kuta

33.514 **Ignorance is bliss: The potential negative impact of knowledge on attention** Adam Biggs, Ryan Kreager, Bradley Gibson

33.515 **Moment-to-Moment Fluctuations in Attentional Distraction by Motion: An fMRI Analysis** Jennifer Lechak, Andrew Leber

33.516 **Linguistic and Feature Cues Interact to Determine Saccadic Latency and Direction in Visual Search** Timothy Wright, Daniel Blakely, John Jones, Walter Boot, James Brockmole

Motion: Flow, depth, and spin

Poster Session, Vista Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.517 **Modeling perceived depth from motion parallax with the motion/pursuit ratio** Mark Nawrot, Mik Ratzlaff, Zach Leonard, Keith Stroyan

33.518 **How noise affects complex motion perception** Nadejda Bocheva, Ljudmil Bojilov

33.519 **Global speed perception in human vision is sensitive to the median physical speed of local image motions** Francesca Rocchi, Timothy Ledgeway, Ben S. Webb

33.520 **A Bistable Counterchange Detector for the Perception of Third-Order Motion** Joseph Norman, Howard Hock, Gregor Schöner

33.521 **Perception of bistable structure-from-motion stimulus, but not binocular rivalry, could be stabilized by visual context** Peng Zhang, Sheng He

33.522 **Isolation of binocular 3D motion cues in human visual cortex** Thaddeus B. Czuba, Alexander C. Huk, Lawrence K. Cormack

33.523 **Reponses of human V6 to random motion, egomotion-incompatible and egomotion-compatible optic flow** Velia Cardin, Rachael Sherrington, Lara Hemsworth, Andrew T Smith

33.524 **Cortical responses to time-varying optic flow patterns show differential tuning by pattern type, speed, and scalp location** Jeremy Fesi, Amanda Thomas, Kenneth Hwang, Rick Gilmore

33.525 **Does assessment of scene-relative object movement rely upon recovery of heading?** Paul A. Warren, Simon K. Rushton, Andrew J. Foulkes

33.526 **Heading recovery from optic flow: Comparing performance of humans and computational models** Andrew J. Foulkes, Paul A. Warren, Simon K. Rushton

33.527 **A Model of MT Motion Pooling Explains Human Heading Bias** Oliver Layton, Ennio Mingolla, N. Andrew Browning

33.528 **Ordinal depth from occlusion using optical flow: A neural model** Stephan Tschechne, Heiko Neumann

33.529 **Near-optimal spatial integration of optic flow information for direction of heading judgments** Laurel Issen, Krystel R. Huxlin, David C. Knill

33.530 **Color and luminance for motion-in-depth** Satoshi Shioiri, Kazumichi Matsumiya, Mitsuharu Ogiya

33.531 **Motion induction or assimilation in depth in a frontoparallel moving display? The importance of depth cues** Jasmin Léveillé, Emma Myers, Arash Yazdanbakhsh

3D perception: Dynamic cues

Poster Session, Vista Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.532 **Perspective transformations and depth scaling in stereopsis and motion parallax** Brian Rogers

33.533 **Perception of slant by an active observer remains constant when looking at a rotating but not at a static plane** Carlo Fantoni, Corrado Caudek, Fulvio Domini

33.534 **Human stability perception implies sophisticated knowledge of physical dynamics** Peter Battaglia, Jessica Hamrick, Josh Tenenbaum

33.535 **Classifying Dynamic 3-D Shape Deformations from Motion Cues** Qasim Zaidi, Anshul Jain

33.536 **Segmentation and depth from motion parallax-induced dynamic occlusion** Ahmad Yoonessi, Curtis Baker

33.537 **The peak motion/pursuit ratio and structure from motion parallax** Keith Stroyan, Mark Nawrot

33.538 **A computational explanation of the stereokinetic effect** Xiaoyang Yang, Zili Liu

Temporal processing

Poster Session, Vista Ballroom

Sunday, May 8, 8:15 am - 12:15 pm

33.539 **The Many Directions of Time** William Curran, Christopher Benton

33.540 **Life motion signals lengthen perceived temporal duration** Li Wang, Yi Jiang

33.541 **The Effect of Simultaneous Context on Perceived Duration** Inci Ayhan, Aurelio Bruno, Shin'ya Nishida, Alan Johnston

33.542 **Apparent duration expansion at low luminance levels.** Aurelio Bruno, Inci Ayhan, Alan Johnston

33.543 **Spatial topography of saccade induced chronostasis** Jonas Knöll, Frank Bremmer

33.544 **The influence of retinal and head-centered motion on perceived duration** Alexander C. Schütz

33.545 **Glance, Glimpse or Stare? The discrimination of gaze duration** Richard Cook, Inci Ayhan, Adrienne Lai, Alan Johnston

33.546 **The time-dilation aftereffect depends on orientation and eye of origin** Laura Ortega, Emmanuel Guzman-Martinez, Marcia Grabowecky, Satoru Suzuki

33.547 **Flicks and ticks: microsaccade-related compression of perceived duration.** Matteo Valsecchi, Karl Gegenfurtner

33.548 **Tempo rubato: animacy speeds up time in the brain** Mauro Carrozzo, Alessandro Moscatelli, Francesco Lacquaniti

33.549 **Optimal coding of interval timing in expert drummers, string musicians and non-musical control subjects** Guido Marco Cicchini, Roberto Arrighi, Luca Cecchetti, Marco Giusti, David Burr

33.550 **Asymmetry and Similarity Phenomena in Backwards Masking Experiments Suggest Reentrant Processing.** Tsvi Achler, Mike Ham, Shawn Barr, John George, Jason McCarley, Garrett Kenyon, Luis Bettencourt

33.551 **Activation of complex stimulus-response mappings without visual awareness** Marjan Persuh, Tony Ro

33.552 **Neural responses to predictably changing visual motion patterns in macaque medial superior temporal cortex** Jacob Duijnhouwer, Bart Krekelberg

33.553 **The temporal order judgment task and achromatic stimuli can reveal the color-motion asynchrony** Eriko Self

33.554 **It Is Not Just Guessing: Electrophysiological Evidence For An Order-Reversal Illusion In RSVP** Brad Wyble, Derek Henig, Howard Bowman

33.555 **The flash-lag effect for luminance change: reduction in terms of active control depends upon the directional consistency between hand movement and luminance change.** Makoto Ichikawa, Yuko Masakura

33.556 **Subject criterion can explain Bloch's law** Hector Rieiro, Susana Martinez-Conde, Jose Luis Pardo-Vazquez, Andrew Danielson, Stephen L. Macknik

33.557 **Novel MR Safe Stimulator With Six Color Channels at Accurate High Temporal Frequencies** Hiroshi Horiguchi, Jonathan Winawer, Brian Wandell, Robert Dougherty

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Sunday Afternoon Talks

Perceptual organization

Talk Session, Royal Ballroom 1-3
Sunday, May 8, 2:30 - 4:15 pm
Moderator: Fred Kingdom

2:30 pm 34.11 **Tangent bundle contour completion with early vision mechanisms** Guy Ben-Yosef, Ohad Ben-Shahar

2:45 pm 34.12 **The Modulation of Illusion Susceptibility by TMS in Right SPL Demonstrates its Role in the Processing of Global, but not Local, Contextual Information** Paul Dassonville, Benjamin D. Lester

3:00 pm 34.13 **Spatial properties of texture-surround suppression of contour-shape coding** Elena Gheorghiu, Frederick A. A. Kingdom

3:15 pm 34.14 **Integrated Bayesian estimation of 3D shape and figure/ground** Jacob Feldman, Manish Singh, Vicky Froyen, Seha Kim, Sung-Ho Kim

3:30 pm 34.15 **Motion attached to a new surface is easier to detect** Daniel Linares, Isamu Motoyoshi, Kazushi Maruya, Shin'ya Nishida

3:45 pm 34.16 **Efficiencies for the statistics of size** Joshua Solomon, Michael Morgan, Charles Chubb

4:00 pm 34.17 **Barrier Effects in Non-Retinotopic Feature Attribution** Haluk Ogmen, Michael Herzog, Murat Aydin

Spatial vision: Natural images

Talk Session, Royal Ballroom 1-3
Sunday, May 8, 5:15 - 6:45 pm
Moderator: Alan Stocker

5:15 pm 35.11 **Natural scene statistics of color and range** Che-Chun Su, Alan Bovik, Lawrence Cormack

5:30 pm 35.12 **High-order statistics for optimal point prediction in natural images** Wilson Geisler, Jeffrey Perry

5:45 pm 35.13 **Image correlates of crowding in natural scenes** Thomas Wallis, Peter Bex

6:00 pm 35.14 **Decoding natural signals from the peripheral retina** Brian McCann, Wilson Geisler, Mary Hayhoe

6:15 pm 35.15 **Shape and Albedo from Shading using Natural Image Statistics** Jonathan Barron, Jitendra Malik

6:30 pm 35.16 **Benefits of a Trans-Saccadic Masks: Preventing the Desensitization Effects of Amplitude Spectrum Slope Discrimination when using Physical Masks.** Bruno Richard, Aaron Johnson

Visual memory

Talk Session, Royal Ballroom 4-5
Sunday, May 8, 2:30 - 4:15 pm
Moderator: Julio Martinez-Trujillo

2:30 pm 34.21 **Breakdown of object-based representations in visual working memory** Daryl Fougnie, George A. Alvarez

2:45 pm 34.22 **An inhibition of return (IOR) effect resulting from directing attention within working memory** Matthew Johnson, Julie Higgins, Kenneth Norman, Per Sederberg, Marcia Johnson

3:00 pm 34.23 **Brain imaging of the mind's eye** Rhodri Cusack, Alejandro Vicente-Grabovetsky, Daniel Mitchell

3:15 pm 34.24 **Decoding retrieval of competing visual memories from neural reactivation** Brice Kuhl, Wilma Bainbridge, Marvin Chun

3:30 pm 34.25 **Working memory representations of visual motion direction are encoded in the firing patterns of neurons in dorsolateral prefrontal cortex, but not in area MT** Diego Mendoza, Julio Martinez-Trujillo

3:45 pm 34.26 **An Ideal Observer Analysis of Visual Short-Term Memory: Evidence for Flexible Resource Allocation** Chris R. Sims, Robert A. Jacobs, David C. Knill

4:00 pm 34.27 **Grandmother Cells, Neocortical Dark Matter and very long term visual memories** Simon J. Thorpe

Face perception: Neural mechanisms

Talk Session, Royal Ballroom 4-5
Sunday, May 8, 5:15 - 6:45 pm
Moderator: Galit Yovel

5:15 pm 35.21 **Mirror-image confusion in human high-level visual cortex** Vadim Axelrod, Galit Yovel

5:30 pm 35.22 **The role of face-selective and object-general mechanisms in the face inversion effect: A simultaneous EEG-fMRI study** Boaz Sadeh, Tamar Goldberg, Chen Avni, Michel Pelleg, Galit Yovel

5:45 pm 35.23 **Contribution of Anterior Temporal Lobe in Recognition of Face and Non-Face Objects** Shahin Nasr, Roger Tootell

6:00 pm 35.24 **Different neural mechanisms underlie repetition suppression to facial identity for same-size and different-size faces in the occipitotemporal lobe** Michael Ewbank, Richard Henson, James Rowe, Andrew Calder

6:15 pm 35.25 **An investigation of the neural basis of face individuation through spatiotemporal pattern analysis** Adrian Nestor, David Plaut, Marlene Behrmann

6:30 pm 35.26 **Facial identity information is transferred asymmetrically between hemispheres** Sara C. Verosky, Nicholas B. Turk-Browne

See page 30 for Abstract Numbering System

Sunday Afternoon Posters

Color and light: Memory, language and synesthesia

Poster Session, Royal Palm 6-8

Sunday, May 8, 2:45 - 6:30 pm

36.301 **Color constancy in perception and memory for real illuminated objects** Sarah R. Allred, Michael J. Wood, Anthony Gambino, Erin Brining

36.302 **Memory colour improves colour constancy for unknown coloured objects.** Jeroen Granzier, Karl Gegenfurtner

36.303 **Hybrid coding of colors: how can we unify color discrimination, categorization and memory?** Chihiro Imai, Satohiro Tajima, Kazuyuki Aihara, Hideyuki Suzuki

36.304 **Effects of familiar objects on color perception** Erika Kanematsu, David H. Brainard

36.305 **Colorfulness-adaptation influenced by recognition of images** Yoko Mizokami, Chie Kamesaki, Hirohisa Yaguchi

36.307 **Inter-individual variations in color naming and the structure of 3D color space** Jordi Roca-Vila, Angela Owen, Gabriele Jordan, Yazhu Ling, C. Alejandro Parraga, Anya Hurlbert

36.308 **Mere exposure influences male colour preference, yet female colour preference is resistant to change.** Chloe Taylor, Alexandra Clifford, Anna Franklin

36.309 **Preference Asymmetries in Color Pairs: Retinal vs. Perceived Size** Karen B. Schloss, Stephen E. Palmer

36.310 **Biological Components of Color Preference are not Universal.** Anna Franklin, Chloe Taylor, Abdulrahman Al-Rasheed, Alexandra Clifford, James Alvarez

36.311 **Cross-modal relations between emotional content and preference for harmony** William S. Griscom, Stephen E. Palmer

36.312 **Color, Music, and Emotion** Stephen E. Palmer, Thomas Langlois, Tawny Tsang, Karen B. Schloss, Daniel J. Levitin

36.313 **The effects of imagined experiences of objects on preferences for colors** Eli D. Strauss, Karen B. Schloss, Stephen E. Palmer

36.314 **The Interaction of Synesthetic and Print Color and the Role of Visual Imagery** Bryan Alvarez, Lynn Robertson

36.315 **Color-Grapheme Associations in Non-Synesthetes: Evidence of Emotional Mediation** Christopher Lau, Karen B. Schloss, Stephen E. Palmer

36.316 **Type-token distinction and response time distribution analysis reveal the unique characteristic of binding in grapheme-color synesthesia** Jun Saiki, Ayako Yoshioka, Hiroki Yamamoto

36.317 **Perception of Synesthetic Colors Occurs Before Conscious Recognition of Graphemes** V.S. Ramachandran, Elizabeth Seckel

Binocular vision: Binocular rivalry and awareness

Poster Session, Royal Palm 6-8

Sunday, May 8, 2:45 - 6:30 pm

36.318 **Suppressed images selectively affect perceptual dominance in binocular rivalry** S.M. Stuit, C.L.E. Paffen, M.J. van der Smagt, F.A.J. Verstraten

36.319 **Fast unconscious fear conditioning** David Carmel, Candace Raio, Elizabeth A. Phelps, Marisa Carrasco

36.320 **Breaking continuous flash suppression: A measure of unconscious processing during interocular suppression?** Timo Stein, Martin Hebart, Philipp Sterzer

36.321 **Binocular depth modulates high-level visual perception without awareness** Ying Wang, Yi Jiang

36.322 **Interocular conflict attenuates change-blindness** Chris Paffen, Roy Hessels, Stefan Van der Stigchel

36.324 **Fluctuations of visual awareness: Motion induced blindness and binocular rivalry** Martin Lages, Katarzyna Jaworska

36.325 **Manipulating contrast of multistable stimuli dissociates selection and maintenance of perceptual dominance in binocular rivalry** David Bressler, Michael Silver

36.326 **Attention controlled binocular suppression in non-amblyopic population** Jolly, Lok-Teng Sio, Chien-Chung Chen, Ai-Hou Wang

36.327 **Semantic analysis does not occur during interocular suppression in the absence of awareness** Min-Suk Kang, Randolph Blake, Geoffrey Woodman

36.328 **Linguistic Penetration of Suppressed Visual Representations** Emily J. Ward, Gary Lupyan

Perception and action: Navigation and wayfinding

Poster Session, Orchid Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.401 **Estimating motion parallax during fixational head movements** Murat Aytekin, Michele Rucci

36.402 **Successful detection of a size change during self-movement** Simon Rushton, Paul Warren

36.403 **Investigating the role of single-viewpoint depth data in visually-guided mobility** Nick Barnes, Paulette Lieby, Hugh Dennet, Janine Walker, Chris McCarthy, Nianjun Liu, Yi Li

36.404 **Mobile Robot vision navigation and obstacle avoidance based on gist and saliency algorithms** Chin-Kai Chang, Christian Siagian, Laurent Itti

36.405 **Spatial Navigation: Why is Active Exploration Better than Passive Exploration?** Elizabeth Chrastil, William Warren

36.407 **Is Path Integration an Automatic Process or a Back-up System for Landmark-based Navigation?** Mintao Zhao, William Warren

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36.408 **Visual estimation of travel distance by leaky integration along veering paths** Markus Lappe, Maren Stiels, Harald Frenz, Jack Loomis

36.409 **An examination of navigational differences between good and poor navigators.** Punya Singh

36.410 **Judging the approach speed of motorcycles and cars in night-time driving conditions** Mark Gould, John Wann, Damian Poulter, Shaun Helman

36.411 **Task-dependent gaze priorities in driving** Brian Sullivan, Constantin Rothkopf, Mary Hayhoe, Dana Ballard

36.412 **The role of decision-making in learning spatial layout: A real-world application** Elyssa Twedt, Tom Banton, E. Blair Gross, Jonathan R. Zadra, Dennis Proffitt

Perception and action: Neural Mechanisms

Poster Session, Orchid Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.413 **The visual P2 is attenuated for objects near the hands** Greg West, Sam Qian, Naseem Al-Aidroos, Richard Abrams, Jay Pratt

36.414 **Visually-evoked readiness potentials reflect anticipation and/or preparation of future movements rather than acts of will** Alexander Schlegel, Walter Sinnott-Armstrong, Thalia Wheatley, Adina Roskies, Peter Tse

36.415 **Motor cortical and distributed network modulation during visuo-motor learning: a TMS-EEG study** Marine Vernet, Shahid Bashir, Edwin Robertson, Alvaro Pascual-Leone

36.416 **The Flickering Wheel Illusion: when alpha rhythms make a static wheel flicker** Rodika Sokoliuk, Rufin VanRullen

36.417 **Spatial perception deficits in optic ataxia patients** Aarlenne Khan, Laure Pisella, Denise Henriques

36.418 **The Allocentric Brain in Action** Lore Thaler, Melvyn A. Goodale

36.419 **Active motor learning of audiovisual objects** Andrew Butler, Karin Harman James

36.420 **Getting Stuck in a Rut with Decision-Making** Ian Flatters, Dr. Pete Culmer, Dr. Andrew Weightman, Dr Richard Wilkie, Prof. Mark Mon-Williams

36.421 **Decisions at a glance: The relative cost of multiple possible actions is represented in conscious perception of spatial layout** Jonathan Zadra, David Rosenbaum, Thomas Banton, Elyssa Twedt, E. Blair Gross, Dennis Proffitt

Multisensory processing: Visual-auditory interactions

Poster Session, Orchid Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.422 **Neural and Information Processing Measures of Audiovisual Integration** Nicholas Altieri

36.423 **Synchronized audio-visual transients drive efficient visual search for motion-in-depth** Marina Zannoli, John Cass, Pascal Mamassian, David Alais

36.424 **Modulation of multisensory processing during rapid reaching movements** Luc Tremblay, Andrew Kennedy, Arup Nath

36.425 **The auditory flash-drag effect: Distortion of auditory space by visual motion** Santani Teng, David Whitney

36.426 **Consistent frequency-based sound matches to natural visual scenes** Aleksandra Sherman, Marcia Grabowecky, Satoru Suzuki

36.427 **Irregular sound rhythm magnifies the temporal sequential effect in audiovisual temporal ventriloquism** Xiaolin Zhou, Lihan Chen, Xi Chen

36.428 **Binding brightness and loudness: what attention filters can observers achieve for dynamic audiovisual displays?** Daniel Mann, Charles Chubb

36.429 **Synchrony and Temporal Order Judgments For Simple and Complex Stimuli** Scott Love, Adam Cheng, Karin Petrini, Frank E. Pollick

36.430 **The way of multisensory spatial processing with audio-visual speech stimuli differs in single and bilateral visual presentations.** Shoko Kanaya, Kazuhiko Yokosawa

36.431 **Detecting synchrony in degraded audio-visual streams** Keshav Dhandhania, Jonas Wulff, Pawan Sinha

36.432 **The role of prior knowledge in development of visual-auditory integration** Rhiannon Thomas, Denis Mareschal, Marko Nardini

36.433 **The Influence of Aging on Audio-Visual Temporal Order Judgments** Chris M. Fiacconi, Emilie C. Harvey, Allison B. Sekuler, Patrick J. Bennett

36.434 **Enhanced Audiovisual Processing in People with One Eye** Stefania S. Moro, Jennifer K. E. Steeves

36.435 **Effects of auditory information on the rubber hand illusion** Masakazu IDE, Yoshihisa OSADA

Attention: Neural mechanisms II

Poster Session, Orchid Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.436 **Representation of visual feature conjunctions in the superior parietal lobule** Florian Baumgartner, Michael Hanke, Franziska Geringswald, Oliver Speck, Stefan Pollmann

36.437 **Attention is a state of mind: Phase of ongoing EEG oscillations predicts the timing of attentional deployment** Ramakrishna Chakravarthi, Rufin VanRullen

36.438 **Gamma-band activity reflects differential selection-for-action before single and double saccades** Daniel Baldauf

36.439 **Source localization of an event-related potential indexing covert shifts of attention in macaques** Michelle Howell Young, Richard Heitz, Braden Purcell, Jeffrey Schall, Geoff Woodman

36.440 **Who's controlling the brakes? Pulsed inhibitory alpha EEG is linked to preparatory activity in the fronto-parietal network measured concurrently with the event-related optical signal (EROS).** Kyle E. Mathewson, Diane M. Beck, Tony Ro, Monica Fabiani, Gabriele Gratton

36.441 **Higher levels of alpha event-related desynchronization are associated with the attentional blink** Mary H. MacLean, Karen M. Arnell

36.442 **Neural decoding during continuous task performance** Joyce Sato-Reinhold, Jocelyn L. Sy, Koel Das, James C. Elliott, Miguel P. Eckstein, Barry Giesbrecht

36.443 **Attentional Modulation of Chromatic and Achromatic Visual Evoked Potentials by Task Relevant Stimuli in Separate Hemi-fields.** Eric J Roth, Chad S Duncan, Kyle C McDermott, Michael A Crognale

36.444 **Using Feature-based Attention to Examine the Hierarchical Structure of Visual Processing** Bobby Stojanoski, Matthias Niemeier

36.445 **The combination of visuospatial cues and Transcranial Magnetic Stimulation (TMS) on the human Frontal Eye Fields (FEF) facilitates conscious visual detection** Lorena Chanes, Ana B. Chica, Antoni Valero-Cabré

36.446 **The attentional blink impairs localization but not enumeration performance in an "enumerating-by-pointing" task** Harry Haladjian, Asha Griffith, Zenon Pylyshyn

36.447 **Attention boosts neural population response via neural response synchronization** Yoshiyuki Kashiwase, Kazumichi Matsumiya, Ichiro Kuriki, Satoshi Shioiri

36.448 **Effects of cognitive training on attention allocation and speed of processing in older adults: An ERP study** Jennifer O'Brien, Jerri Edwards, Nathan Maxfield, Stephanie Karidas, Victoria Williams, Jennifer Lister

36.449 **Age-related differences in processing task-irrelevant stimulus properties: a single-trial ERP study** Kacper Wieczorek, Carl Gaspar, Cyril Pernet, Guillaume Rousselet

36.450 **Decoding object-based attention signals in the human brain** Youyang Hou, Taosheng Liu

36.451 **Single-trial ERP modelling reveals how task constraints modulate early visual processing** Guillaume Rousselet, Carl Gaspar, Kacper Wieczorek, Cyril Pernet

Attention: Models

Poster Session, Orchid Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.452 **A model of performance in whole and partial report experiments** Tobias Andersen, Søren Kyllingsbæk

36.453 **Visual attention in spatial cuing and visual search** Jongsoo Baek, Yukai Zhao, Zhong-Lin Lu, Barbara Dosher

36.454 **On a distinction between detection and discrimination: metacognitive advantage for signal over noise** Brian Maniscalco, Hakwan Lau

36.455 **Fast and slow dynamics in learning and attending to objects: Transient Where and sustained What stream inputs explain individual differences** Nicholas C Foley, Stephen Grossberg, Ennio Mingolla

36.456 **Assessing models of visual saliency against explicit saliency judgments from one hundred humans viewing eight hundred real scenes** Kathryn Koehler, Fei Guo, Sheng Zhang, Miguel Eckstein

36.457 **Quantifying the relative influence of photographer bias and viewing strategy on scene viewing** Ali Borji, Dicky Nauli Sihite, Laurent Itti

Perceptual learning: Models

Poster Session, Vista Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.501 **The Modelfest Perceptual Learning Initiative: A Status Report** Stanley Klein, Thom Carney, Cong Yu, Dennis Levi

36.502 **Perceptual Learning without Awareness: a Motion Pattern Gated Reinforcement Learner** Stefan Ringbauer, Heiko Neumann

36.503 **A Multi-Location Augmented Hebbian Reweighting Model (m-AHRM) of Transfer in Perceptual Learning** Barbara Dosher, Pamela Jeter, Jiajuan Liu, Zhong-Lin Lu

36.504 **Optimality predicts transition to specificity in perceptual learning** Jacqueline M. Fulvio, C. Shawn Green, Paul R. Schrater

36.505 **Statistical summary perception interferes with statistical learning and vice versa** Jiaying Zhao, Nhi Ngo, Ryan McKendrick, Nicholas B. Turk-Browne

36.506 **Learned bias for 3-D shape perception without object motion** Anshul Jain, Benjamin T. Backus

36.507 **A cascade-correlation model of bistable perception** Caitlin Mouri, Avi Chaudhuri

36.508 **Cue recruitment for extrinsic signals after training with low-information stimuli** Benjamin T. Backus, Anshul Jain, Stuart G. Fuller

36.509 **Evaluative Conditioning with Mental Imagery** David Lewis, Joel Pearson

36.510 **The effect of confidence hysteresis on numerical discrimination** Darko Odic, Howard Hock, Justin Halberda

36.511 **Contributions of visual and temporal similarity to statistical learning** Anna C. Schapiro, Lauren V. Kustner, Nicholas B. Turk-Browne

36.512 **Top-down inferences affect visual sensitivity in a signal detection task.** Eyal Dechter, Jaron Colas, Po-Jang Hsieh, Vul Ed

36.513 **Humans adaptively use temporal correlations in stimulus history to estimate velocity** Oh-Sang Kwon, David Knill

Perceptual learning: Neural mechanisms

Poster Session, Vista Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.514 **A new role of feedback: facilitating stabilization of perceptual learning after training** Jonathan Dobres, Charles Liu, Takeo Watanabe

36.515 **Symbol learning is faster and more 'fluent' in young macaque** Margaret Livingstone, Krishna Srihasam

36.516 **The role of contiguity and contingency in visual perceptual learning** Dongho Kim, Aaron Berard, Aaron Seitz, Takeo Watanabe

36.517 **Diurnal variation of glucocorticoids appears to modulate V1-specific perceptual learning** Frank D. Nelli, Michael F. Wesner

36.518 **The effects of naps on the magnitude and specificity of perceptual learning of motion direction discrimination** Ariel Rokem, Michael Silver, Elizabeth McDevitt, Sara Mednick

36.519 **Learning to Attend Induces an Increased Response to Unattended Stimuli** Anna Byers, John Serences

36.520 **Dynamics of feedback-driven visual learning** Christopher D'Lauro, Yang Xu, Rob Kass, Michael J. Tarr

36.521 **Altered attentional modulation in visual cortex during perceptual learning** Marco Bartolucci, Andrew T Smith

36.522 **Increases in grey matter volume induced by perceptual learning** Thomas Ditye, Ryota Kanai, Bahador Bahrami, Neil Muggleton, Geraint Rees, Vincent Walsh

36.523 **Perceptual learning and decision making in human medial frontal cortex** Marcus Grueschow, Thorsten Kahnt, Oliver Speck, John-Dylan Haynes

36.524 **Association of perceptual learning to reduce spatial crowding with shrinkage of receptive fields** Tsung-Ren Huang, Takeo Watanabe

36.525 **Cortical reorganization in macular degeneration depends on complete loss of foveal input: A longitudinal case study** Joshua B. Julian, Daniel D. Dilks, Eli Peli, Nancy Kanwisher

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36.526 **Training in Contrast Detection Improves Motion Perception in Amblyopia** Fang Hou, Chang-Bing Huang, Liming Tao, Lixia Feng, Yifeng Zhou, Zhong-lin Lu

36.527 **Anatomical correlates of early vs. late symbol training** Krishna Srihasam, Margaret Livingstone

36.528 **Learning optimizes visual shape templates in the human brain** Shu-Guang Kuai, Zoe Kourtzi

Eye movements: Pursuit and following

Poster Session, Vista Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.529 **Spatial summation properties of the human ocular following response (OFR): dependence upon the spatial frequency of the stimulus** B.M. Sheliga, C. Quaia, L.M. Optican, E.J. FitzGibbon

36.530 **Video-game training improves smooth pursuit precision** Lily Tsoi, Sarah Koopman, Jeremy Wilmer

36.531 **Saccadic intrusions as an index of mental workload** Satoru Tokuda, Goro Obinata, Evan Palmer, Alex Chaparro

36.532 **Keep your eye on the ball: watching and playing sports linked to smooth pursuit precision** Sarah Koopman, Lily Tsoi, Jeremy Wilmer

36.533 **Microstimulation supports a causal role for the supplementary eye field in an oculomotor decision** Stephen Heinen, Shun-nan Yang, Joel Ford

36.534 **Dynamic integration of salience and value information for smooth pursuit eye movements** Karl R. Gegenfurtner, Felix Lossin, Alexander C. Schütz

36.535 **The perceptual and cortical consequences of adaptation to smooth pursuit: an MEG study of the extra-retinal motion aftereffect** Benjamin Dunkley, Tom Freeman, Suresh Muthukumaraswamy, Krish Singh

36.536 **Illusory bending of a pursuit target sheds light on early direction estimation.** Kurt Debono, Alexander Schütz, Karl Gegenfurtner

36.537 **Interaction between retinal and extra retinal signals in dynamic motion integration for smooth pursuit** Amarender Bogadhi, Anna Montagnini, Guillaume Masson

36.538 **Speed discrimination during optokinetic nystagmus: probing transsaccadic memory of visual motion** Paul MacNeilage, Bjorn Vlaskamp

36.539 **Contrast dependent biases in pattern motion perception and eye movement** Romesh D. Kumbhani, Miriam Spering, J. Anthony Movshon

Motion: Local mechanisms and models

Poster Session, Vista Ballroom

Sunday, May 8, 2:45 - 6:30 pm

36.540 **Sensitivity impairment for detecting color alternation along an apparent motion trajectory** Takehiro Nagai, Hiroto Kimura, Shigeki Nakauchi

36.541 **Color contribution to motion due to early expansive nonlinearities within the luminance pathway** Rémy Allard, Jocelyn Faubert

36.542 **A motion detection model based on a recurrent network** Jeroen Joukes, Bart Krekelberg

36.543 **Direction discrimination thresholds in binocular, monocular, and dichoptic viewing: motion opponency and contrast gain control** Goro Maehara, Robert Hess, Mark Georgeson

36.544 **Visual acuity with a motion detection target compared to Landolt Rings** John Hayes, Yu-Chi Tai, Sung Ouk Jang, James Sheedy

36.545 **Pattern discrimination for moving random textures: richer stimuli are more difficult to recognize** Claudio Simoncini, Anna Montagnini, Laurent U. Perrinet, Pascal Mamassian, Guillaume S. Masson

36.546 **Perception of ambiguous visual stimuli is flexibly modulated by associative learning** Philipp Sterzer, Marie Lacroix, Katharina Schmack

36.547 **Motion transparency and spatial integration size – a modeling study** Florian Raudies, Ennio Mingolla, Heiko Neumann

36.548 **Two forms of directional bias revealed by multistable motion stimuli** Christopher Shooner, J. Anthony Movshon

36.549 **Motion Standstill in Luminance-Modulated and Texture-Contrast-Modulated Gratings** George Sperling, Son-Hee Lyu

36.550 **The motion-induced shift in the perceived location of a grating also shifts its aftereffect** Anna A. Kosovicheva, Gerrit W. Maus, Stuart Anstis, Patrick Cavanagh, Peter U. Tse, David Whitney

36.551 **Local motion aftereffects are influenced by the global motion adaptor direction** Peter Scarfe, Alan Johnston

36.552 **An ultra-fast motion aftereffect** Mark Wexler

36.553 **Components of the curveball illusion: Independent contributions of carrier and envelope** Michael von Grünau, Samantha Sparapani, Ruben Bastien

36.554 **A flash-drag effect in random motion reveals involvement of preattentive motion processing.** Taiki Fukiage, David Whitney, Ikuya Murakami

36.555 **The flash-lag effect (FLE) as a biasing factor for offside determination in soccer** Stephen R. Gabbard, Scott N.J. Watamaniuk

36.556 **Perceptual segmentation and integration of spatially-overlapping moving features in humans and macaques** Jennifer Gaudio, Xin Huang

Monday Morning Talks

Development: Disorders

Talk Session, Royal Ballroom 1-3

Monday, May 9, 8:00 - 9:45 am, Moderator: Zahra Hussain

8:00 am 41.11 **Perceptual learning alleviates crowding in amblyopia and the normal periphery** Zahra Hussain, Ben Webb, Andrew Astle, Paul McGraw

8:15 am 41.12 **Is there a 'top-down' component of crowding in peripheral and amblyopic vision?** Dennis Levi, Gong-Liang Zhang, Cong Yu

8:30 am 41.13 **Changes in Cortical Functional Organization After Initiation of Sight in the Congenitally Blind** Pawan Sinha, Scott Gorlin, Tapan Gandhi

8:45 am 41.14 **Pronounced visual motion deficits in developmental dyslexia associated with a specific genetic phenotype** Maria Concetta Morrone, Marco Cicchini, Monica Consonni, Francesca Bocca, Sara Mascheretti, Paola Scifo, Cecilia Marino, Daniela Perani

9:00 am 41.15 **Color Discrimination and Preference in Autism Spectrum Disorder** Anya Hurlbert, Camilla Loveridge, Yazhu Ling, Anastasia Kourkoulou, Sue Leekam

9:15 am 41.16 **Atypical Integration of Motion Signals in Autism** Caroline Robertson, Cibu Thomas, Dwight Kravitz, Eunice Dixon, Greg Wallace, Alex Martin, Simon Baron-Cohen, Chris Baker

9:30 am 41.17 **No recovery of function for a specific deficit in individuating faces 40 years after a lesion in the ventral occipito-temporal cortices at age five** Xiaokun Xu, Mark Lescroart, Irving Biederman

Color and light: Mechanisms

Talk Session, Royal Ballroom 1-3

Monday, May 9, 10:45 - 12:30 pm

Moderator: Angela Brown

10:45 am 42.11 **Lightness of a black room seen through a veiling luminance** Alan Gilchrist, Stephen Ivory

11:00 am 42.12 **Lightness perception in high-dynamic range contexts** Ana Radonjić, Alan Gilchrist, Sarah Allred, David Brainard

11:15 am 42.13 **Mechanisms of the dimming and brightening after-effects** Jenny Bosten, Donald MacLeod

11:30 am 42.14 **A low-dimensional statistical model of natural lighting** Yaniv Morgenstern, Richard F. Murray, Wilson S. Geisler

11:45 am 42.15 **Physiological signature of time-varying color after-images** Robert Ennis, Barry Lee, Qasim Zaidi

12:00 pm 42.16 **Neural Representation of Form-Based Color Filling-In in Early Visual Cortex** Sang Wook Hong, Frank Tong

12:15 pm 42.17 **How many basic color terms are there in English?** Delwin Lindsey, Angela Brown

Attention: Spatial selection & modulation

Talk Session, Royal Ballroom 4-5

Monday, May 9, 8:00 - 9:45 am, Moderator: Preeti Verghese

8:00 am 41.21 **Attention selects informative neural populations** Preeti Verghese, Yee-Joon Kim, Alexander Wade

8:15 am 41.22 **Importance of Spatial Cuing of Attention in High Precision Judgments** Richard S. Hetley, Barbara Anne Dosher, Zhong-Lin Lu

8:30 am 41.23 **Sustained selective attention warps perceived space: Parallel and opposing effects on attended and inhibited objects** Brandon Liverence, Brian Scholl

8:45 am 41.24 **Encoding a spatial relationship between two objects requires selection of each object.** Lauren E. Kahn, Steven L. Franconeri

9:00 am 41.25 **Dilution and task difficulty, but not load, affect selective attention.** Yehoshua Tsal, Hanna Benoni

9:15 am 41.26 **Inter-trial inhibition of spatial attention** JeeWon Ahn, Glyn Humphreys, Alejandro Lleras

9:30 am 41.27 **A simple feedback-based model explains the diverse effects of attention on visual responses** Thomas Miconi, Rufin VanRullen

Perceptual learning: Models and neural mechanisms

Talk Session, Royal Ballroom 4-5

Monday, May 9, 10:45 - 12:30 pm, Moderator: Alexander Petrov

10:45 am 42.21 **Perceptual Learning Leads to Hemisphere-Specific Cortical Thickening** Jascha Swisher, Janneke Jehee, Sam Ling, Frank Tong

11:00 am 42.22 **White matter connectivity changes between visual and higher-level cortical regions in association with perceptual learning revealed by diffusion tensor tractography** Dong-Wha Kang, Charles Liu, Li-Hung Chang, Emi Takahashi, Takeo Watanabe, Yuka Sasaki

11:15 am 42.23 **Changes in white matter in young adults associated with perceptual learning** Charles Liu, Li-Hung Chang, Yina Tsai, Dong-Wha Kang, Yuka Sasaki, Takeo Watanabe

11:30 am 42.24 **Multi-location Augmented Hebbian Re-Weighting Accounts for Transfer of Perceptual Learning following Double Training** Jiajuan Liu, Zhong-Lin Lu, Barbara Dosher

11:45 am 42.25 **Dissociable Perceptual Learning Mechanisms Revealed by Diffusion-Model Analysis** Alexander A. Petrov, Nicholas M. Van Horn, Roger Ratcliff

12:00 pm 42.26 **Uncertainty in scene segmentation: Statistically optimal effects on learning visual representations** József Fiser, Gergő Orbán, Máté Lengyel

12:15 pm 42.27 **Does primary visual cortex operate in the universal language of modality-independent space? Insights from fMRI in the congenitally and late blind** Lora Likova, Ming Mei, Spero Nicholas

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Monday Morning Posters

Perceptual organization: Shapes and objects

Poster Session, Royal Palm 6-8

Monday, May 9, 8:15 am - 12:15 pm

43.301 **A Comparison of Object Interpolation in Complex Motions** Hideyuki Unuma, Hisa Hasegawa, Philip J. Kellman

43.302 **The influence of local orientation on shape discrimination** Christian Kempgens, Tim Schade, Gunter Loffler, Harry S. Orbach

43.303 **The persistence of global form (Part I): Stimulus inversion influences V1 fMRI activity** Lars Strother, P.S. Mathuranath, Cheryl Lavell, Adrian Aldcroft, Melvyn Goodale, Tutis Vilis

43.304 **The persistence of global form (Part II): Figure-specific fMRI activity in V1** Cheryl Lavell, Lars Strother, Tutis Vilis

43.305 **Part-whole integration of 2D shapes in the hippocampus and the basal ganglia** Anthony Cate, Xiaojian Kang, Timothy Herron, David Woods

43.306 **Exploring figure/ground assignment using a local method** Vicky Froyen, Jacob Feldman, Manish Singh

43.307 **The Influence of Axiality on Figure/Ground Assignment** Seha Kim, Manish Singh, Jacob Feldman

43.308 **Differential sensitivity to natural and unnatural shape and part transformations** Kristina Denisova, Manish Singh, Jacob Feldman, Xiaotao Su

43.309 **Constant Curvature Parts-Based Representation of Contour Shape** Patrick Garrigan, Philip Kellman

43.310 **On The Relative Effectiveness of Symmetry and Convexity as Figural Cues** Andrew Mojica, Mary Peterson

43.311 **Integration of local and global cues to reconstruct surface structure** Naoki Kogo, Vicky Froyen, Jacob Feldman, Manish Singh, Johan Wagemans

43.312 **Correspondence in apparent motion: Features don't like to travel far** Elisabeth Hein, Patrick Cavanagh

43.313 **Object Surface Completion: Filling-Out by Incremental Filling-In** Bruno Breitmeyer, Jane Jacob

43.314 **The Binding Ring Illusion: Misperceived size constrains models of size perception** J. Daniel McCarthy, Gideon Caplovitz

43.315 **Reevaluating whether attention is drawn to figures** Elizabeth Salvagio, Andrew Mojica, Ruth Kimchi, Mary Peterson

43.316 **Differences in the Role of Context on Polar and Translational Glass Patterns** Patrick Schiller, Nicole Anderson

43.317 **Object-based warping: Distribution of distortions over an object's surface and independence of shape** Timothy Vickery, Marvin Chun

43.318 **What's the "Point"? Assessing the Effectiveness of Stimuli that Indicate Direction** James Pomerantz, Anna Stupina, Erin Sparck

Attention: Temporal

Poster Session, Royal Palm 6-8

Monday, May 9, 8:15 am - 12:15 pm

43.319 **Distractor Suppression During the Attentional Blink: Behavioral Evidence for Flexible Selection** James Elliott, Barry Giesbrecht

43.320 **The attentional blink impairs saccade production** Carly J. Leonard, Steven J. Luck

43.321 **Rational expectations about object transitions account for the attentional blink and repetition blindness** Edward Vul

43.322 **Remembering the Time: Repetition of Temporal Position Facilitates Selection in RSVP** Amit Yashar, Dominique Lamy

43.323 **Updating temporal representations** Amanda Tkaczyk, Cecilia Meza, Marc Hurwitz, Britt Anderson, James Danckert

43.324 **Temporally structured and symbolic cues operate via different mechanisms: Psychophysical and chronometric evidence.** Tim Martin

43.325 **Detecting sequence disruptions within events is not automatic.** Alicia Hymel, Daniel Levin

43.326 **Lateralized Temporal Parietal Junction (TPJ) activity during temporal order judgment tasks** Sarah C. Tyler, Samhita Dasgupta, Lorella Battelli, Emily D. Grossman

43.327 **Effective Visual Short-Term Storage Capacity and Speed of Encoding are Affected by Arousal** Thomas Alrik Sørensen, Claus Bundesen

43.328 **Selective attention and multisensory integration** Welber Marinovic, Paul Dux, Derek Arnold

43.329 **Decoding the mismatch between expectation and sensory input** Benoit Cottereau, Justin Ales, Anthony Norcia

Eye movements: Methods and gaze

Poster Session, Orchid Ballroom

Monday, May 9, 8:15 am - 12:15 pm

43.401 **A new technique for the analysis of sequential eye movements** Taylor Hayes, Per Sederberg, Alexander Petrov

43.402 **A new method for comparing scanpaths based on vectors and dimensions** Richard Dewhurst, Jalszka Jarodzka, Kenneth Holmqvist, Tom Foulsham, Marcus Nyström

43.403 **Participants know best: influence of calibration method on accuracy** Kenneth Holmqvist, Marcus Nyström, Richard Andersson

43.404 **Assessing visual delays using pupil oscillations** Jeffrey B. Mulligan

43.405 **Improving gaze accuracy and predicting fixation in real time with video based eye trackers** Paul Ivanov, Tim Blanche

43.406 **A Simple Non-Parametric Method for Classifying Eye Fixations** Matthew S Mould, David H Foster, Kinjiro Amano, John P Oakley

43.407 **A human inspired gaze estimation system** Jonas Wulff, Pawan Sinha

43.408 **Inferring locations of objects from gaze in edited motion pictures.** Daniel Levin, Alicia Hymel, Stephen Killingsworth, Megan Saylor

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43.409 **Proactive gaze behavior: which observed action features do influence the way we move our eyes?** Alessandra Sciutti, Francesco Nori, Marco Jacono, Giorgio Metta, Giulio Sandini, Luciano Fadiga

43.410 **Reading with Normal Vision and with Age-Related Macular Degeneration** Dianne Lam, Luminita Tarita-Nistor, Michael H. Brent, Martin J. Steinbach, Esther G. González

43.411 **Switching the response direction of pro- and antisaccades: Effects of aging** Bettina Olk, Yu Jin

43.412 **Fixation Durations During Scene Transitions** Syed Omer Gilani, Fook Kee Chua, Shih-Cheng Yen

43.413 **Gaze sensitivity on human face** Daisuke Kuribayashi, Hitomi Ikeyama, Motoyasu Honma, Yoshihisa Osada, Yasuto Tanaka

43.414 **Oculo-motor patterns induced by reading in peripheral vision.** Aurelie Calabrese, Carlos Aguilar, Louis Hoffart, Geraldine Faure, John Conrath, Eric Castet

43.415 **Ocular Motor Fatigue Induced by Prolonged Visual Display Terminal (VDT) Tasks** Sheng Tong Lin, Larry Allen Abel

43.416 **The stimulus to accommodation: changes in retinal contrast matter, not the spatial frequency content.** Kevin J. MacKenzie, Simon J. Watt

Binocular vision: Eye movements

Poster Session, Orchid Ballroom

Monday, May 9, 8:15 am - 12:15 pm

43.417 **Extra-retinal signals affect the perceived speed of 3D motion** Arthur J. Lugtigheid, Eli Brenner, Andrew E. Welchman

43.418 **Assessing vergence-accommodation conflict as a source of discomfort in stereo displays** Joohwan Kim, Takashi Shibata, David Hoffman, Martin Banks

43.419 **Eye movements during vergence effort in stereoscopic ocular pursuit task and their relations to visual fatigue and stereopsis** Cyril Vienne, Laurent Blondé, Didier Doyen, Pascal Mamassian

43.420 **Eye movements and reaction times for detecting monocular regions in binocularly viewed scenes** Katharina M Zeiner, Manuel Spitschan, Keith A May, Li Zhaoping, Julie M Harris

43.421 **Vergence, pin interval, and the double-nail illusion** Masahiro Ishii, Rie Igarashi, Masayuki Sato

43.422 **Single-trial decoding of binocular rivalry switches from oculometric and pupil data** Sébastien M. Crouzet, Torsten Stemmler, Madison Capps, Manfred Fahle, Thomas Serre

43.423 **A Comparison of Self-Reported and Measured Autostereogram Skills with Clinical Indicators of Vergence Ability in Esophores** Patricia Cisarik, Erin Kindy

43.424 **Is the midline dependence of Binocular Depth Contrast based on the retinal midline or the head-and-body midline?** Wenxun Li, Todd E. Hudson, Leonard Matin

43.425 **Stereoacuity of Athletes in Primary and Non-Primary Gazes** Herb Yoo, Alan Reichow, Graham Erickson

Face perception: Features and configuration

Poster Session, Orchid Ballroom

Monday, May 9, 8:15 am - 12:15 pm

43.426 **The contribution of texture and shape to face aftereffects for identity versus age.** Jason Barton, Michelle Lai, Ipek Oruç

43.427 **Strength of the adapter signal, not adapter discriminability, produces reduced facial expression after-effect in crowding** Hong Xu, Leila Montaser-Kouhsari, Pan Liu

43.428 **Inter-Feature Transfer of Aftereffects: Evidence of Adaptation in Whole Face Representations** Maryam Dosani, Raika Pancaroglu, Ipek Oruç, Jason JS Barton

43.429 **Body-selective neural mechanisms prefer a whole body over the sum of its parts** Talia Brandman, Galit Yovel

43.430 **Contribution of SF and Orientation to upright and inverted face perception** Valerie Goffaux, Jaap van Zon, Dietmar Hestermann, Christine Schiltz

43.431 **Internal feature position in faces is coded relative to external contour: adaptation aftereffects, neural coding models, and 3D head rotation.** Elinor McKone, Mark Edwards

43.432 **High order invariance in spatial frequencies implied by distinct latency differences of face induced N200 components** Liu Zuxiang, Wu Ruijie, Zuo Zhentao, Shi Liang

43.433 **The diagnostic features used for recognizing faces under natural conditions** Grayce Selig, Dmitriy Lisitsyn, Peter Bex, Jozsef Fiser

43.434 **Exploring chimpanzee face space** Lisa Parr, Anthony Little, Peter Hancock

43.435 **Sibling Rivalry: Facial distinctiveness and binocular rivalry** Sean F. O'Neil, Gideon P. Caplovitz, Michael Webster

43.436 **The composite face illusion and its disappearance with misaligned faces: an effect of metric distance or part separation?** Renaud Laguesse, Bruno Rossion

43.437 **Face inversion with sequential restricted viewing** Thomas James, Maxim Bushmakin, Hannah Stanton, Elizabeth Danielson

43.438 **The use of horizontal information underlies face identification accuracy** Matthew V. Pachai, Allison B. Sekuler, Patrick J. Bennett

43.439 **Don't look! Orienting to the eyes is not (entirely) under volitional control** Kaitlin Laidlaw, Evan Risko, Alan Kingstone

Face perception: Neural mechanisms

Poster Session, Orchid Ballroom

Monday, May 9, 8:15 am - 12:15 pm

43.440 **Defining the fundamental stimulation frequency for individual face perception** Esther Alonso Prieto, Bruno Rossion

43.441 **Holistic perception of faces: direct evidence from frequency-tagging stimulation** Adriano Boremanse , Bruno Rossion

43.442 **Investigating the neural correlates of personally familiar face recognition using dynamic visual stimulation—an fMRI study** Meike Ramon, Joan Liu, Bruno Rossion

43.443 **ERP evidence for the speed of face specificity in the human brain: disentangling the contribution of low-level cues and high-level face representations** Bruno Rossion, Stephanie Caharel

43.444 **The localization and functional connectivity of face-selective regions in the human brain** Jodie Davies-Thompson, Timothy J. Andrews

43.445 **Image-invariant neural responses to familiar and unfamiliar faces** Timothy J Andrews, Jodies Davies-Thompson, Katherine Newling

43.446 **Sensitivity of human cortical face selective regions to face shape and texture** Heidi Baseler, Timothy Andrews, Mike Burton, Rob Jenkins, Andrew Young

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43.447 **Confounding of prototype and similarity effects in fMRI studies of face and object representation** Geoffrey K Aguirre, David A Kahn

43.448 **Face-likeness and variability drive responses in human face-selective regions** Nicolas Davidenko, David Remus, Kalanit Grill-Spector

43.449 **Early species sensitivity of face and eye processing: an adaptation study** Dan Nemrodov, Roxane Itier

43.450 **Multi-voxel pattern analysis of face and object exemplar discrimination in occipital cortex.** Ipek Oruc, Jason Barton

43.451 **Differential selectivity for dynamic versus static information in face selective regions** David Pitcher, Daniel Dilks, Rebecca Saxe, Nancy Kanwisher

43.452 **Structural connectivity of face selective cortical regions with high definition fiber tracking** John A. Pyles, Timothy D. Verstynen, Walter Schneider, Michael J. Tarr

43.453 **Scrambling horizontal face structure: behavioral and electrophysiogical evidence for a tuning of visual face processing to horizontal information** Corentin Jacques, Christine Schiltz, Kevin Collet, Sanne ten Oever, Valerie Goffaux

43.454 **Frontal Lobe Involvement in Face Discrimination** Laura Cacciamani, Mary A. Peterson

43.455 **Optimal eye-fixation positions for face perception: A combined ERP and eye-tracking study** Younes Zerouali, Boutheina Jemel

Tuesday Morning Talks

3D perception

Talk Session, Royal Ballroom 1-3
Tuesday, May 10, 8:00 - 9:45 am
Moderator: Andrew Welchman

8:00 am 51.11 **Spatial Interactions Enhance Stereoscopic Surface Discrimination** Christopher Tyler

8:15 am 51.12 **Supra-threshold luminance and range discontinuities in natural scenes** Yang Liu, Lawrence Cormack, Alan Bovik

8:30 am 51.13 **Translating from local disparities to surface slant in the human visual cortex** Hiroshi Ban, James Blundell, Andrew E Welchman

8:45 am 51.14 **Critical timing in combinations of stereo-disparity and shading** P. George Lovell, Marina Bloj, Julie Harris

9:00 am 51.15 **Perception of Physical Stability of Asymmetrical Three-Dimensional Objects** Steven A. Cholewiak, Manish Singh, Roland Fleming

9:15 am 51.16 **3D Shape perception does not depend on symmetry** Flip Phillips, James Todd, Eric Egan

9:30 am 51.17 **Visuo-motor recalibration alters depth perception** Robert Volcic, Carlo Fantoni, Corrado Caudek, Fulvio Domini

Binocular vision

Talk Session, Royal Ballroom 1-3
Tuesday, May 10, 10:45 - 12:30 pm
Moderator: Jenny Read

10:45 am 52.11 **The Spatiotemporal Limits of Stereovision** Kane David, Guan Phillip, Hoffman David, Martin Banks

11:00 am 52.12 **Optimal disparity estimation in stereo-images of natural scenes** Johannes Burge, Wilson Geisler

11:15 am 52.13 **Spatial stereoresolution for depth corrugations may be set in primary visual cortex** Fredrik Allenmark, Jenny Read

11:30 am 52.14 **Visual cortex responses to visual and electrical stimulations recorded by voltage sensitive dye imaging in cats and tree shrews.** Christian Casanova, Azaheh Naderiyanha, Matthieu Vanni

11:45 am 52.15 **Experience-dependent plasticity in adult human visual cortex revealed by binocular rivalry** Claudia Lunghi, David Burr, Concetta Morrone

12:00 pm 52.16 **Human parietal cortex structure determines individual differences in perceptual rivalry** Ryota Kanai, David Carmel, Bahador Bahrami, Geraint Rees

12:15 pm 52.17 **Predicting the conscious experience of other people** Kristian Sandberg, Bahador Bahrami, Ryota Kanai, Gareth Barnes, Morten Overgaard, Geraint Rees

Eye Movements: Mechanisms, methods and models

Talk Session, Royal Ballroom 4-5
Tuesday, May 10, 8:00 - 9:45 am
Moderator: Therese Collins

8:00 am 51.21 **Effects of pupil size on recorded gaze position: a live comparison of two eyetracking systems** Jan Drewes, Anna Montagnini, Guillaume S. Masson

8:15 am 51.22 **Superior colliculus inactivation alters the influence of covert attention shifts on microsaccades** Ziad Hafed, Lee Lovejoy, Richard Krauzlis

8:30 am 51.23 **The role of efference copy in saccadic adaptation** Thérèse Collins, Joshua Wallman

8:45 am 51.24 **Saccades to moving targets are not influenced by the speed overestimation at low luminance** Maryam Vaziri Pashkam, Patrick Cavanagh

9:00 am 51.25 **Reconsidering Yarbus: Pattern classification cannot predict observer's task from scan paths** Michelle R Greene, Tommy Liu, Jeremy M Wolfe

9:15 am 51.26 **Cue Capture: When predictive cues hinder search performance** Stephen C Mack, Sheng Zhang, Miguel P Eckstein

9:30 am 51.27 **Searching the horizon for small targets** Albert Ahumada, Keith Billington, Jerry Kaiwi

Face perception: Cognitive factors

Talk Session, Royal Ballroom 4-5
Tuesday, May 10, 10:45 - 12:30 pm
Moderator: Jessica Taubert

10:45 am 52.21 **Observer- and stimulus-specific effects in unconscious evaluation of faces on social dimensions** Bahador Bahrami, Sara Ajina, Spas Getov, Lorna Stewart, Alex Todorov, Geraint Rees

11:00 am 52.22 **Dynamic Cultural Representations of Facial Expressions of Emotion are not Universal** Rachael Jack, Oliver Garrod, Hui Yu, Roberto Caldara, Philippe Schyns

11:15 am 52.23 **Perception of health and facial attractiveness is influenced by small changes to lifestyle.** David Perrett, Dan Re, Ross Whitehead, Ian Stephen, Dengke Xiao

11:30 am 52.24 **Facial Expression Production and Training** Iris Gordon, James W. Tanaka, Matt Pierce, Marian Bartlett

11:45 am 52.25 **When angry faces are just (a) cross** Guy Wallis, Steven Cloete, Carlos Coelho

12:00 pm 52.26 **A General Recognition Theory Study of Race Adaptation** Leslie Blaha, Noah Silbert, James Townsend

12:15 pm 52.27 **The other "other-species" effect: Understanding important differences in primate face discrimination.** Jessica Taubert, Lisa Parr

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Tuesday Morning Posters

Attention: Spatial selection and modulation

Poster Session, Royal Palm 6-8

Tuesday, May 10, 8:15 am - 12:15 pm

53.301 **Attentional selection of relative SF mediates global versus local processing: EEG evidence** Anastasia Flevaris, Shlomo Bentin, Lynn Robertson

53.302 **Spatial attention affects perceived stimulus position** Paola Binda, M. Concetta Morrone, Geoffrey M. Boynton, Scott O. Murray

53.303 **Independent effects of adaptation and attention on speed perception** Katharina Anton-Erxleben, Katrin Herrmann, Marisa Carrasco

53.304 **The attentional repulsion effect distorts space but not objects** Alessandra DiGiacomo, Davood Ghara Gozli, Greg West, Jay Pratt

53.305 **Competition limits spatial selection** Brian Levinthal, Sumeeth Jonathan, Jason Scimeca, Steven Franconeri

53.306 **Low level perceptual, not attentional, processes modulate distractor interference in high perceptual Load displays: evidence from neglect patients** Carmel Mevorach, Glyn Humphreys, Yehoshua Tsal

53.307 **The Distribution of Attention in the Visual Field Under Perceptual Load** Nathan Parks, Diane Beck, Arthur Kramer

53.308 **Learning to Ignore Distraction: Training and Transfer** Matthew Windsor, Mark Neider, Arthur Kramer

53.309 **Selective attention and contrast gain control** Yee Joon Kim, Preeti Verghese

53.310 **The distribution of visuospatial attention is influenced by illusory differences in the size of physically identical objects** Lisa N. Jefferies, Leon Gmeindl, Steven Yantis

53.311 **Conjunction search without target-specific bias: An eye movement study** Giles Anderson, Dietmar Heinke, Glyn Humphreys

53.312 **Learning where to attend: Priming of pop-out drives target selection** Arni Kristjansson, Randolph Blake, Jan Brascamp

53.313 **The modulation of spatial attention by exogenous cues in visual line bisection: Effects of cue-line SOA, cue contrast and cue position** Yamaya Sosa, Mark E. McCourt

53.314 **Detecting goal-relevant events boosts activity in primary visual cortex** Khena Swallow, Tal Makovski, Yuhong Jiang

53.315 **Is there predictive remapping of visual attention across eye movements?** William Harrison, Roger Remington, Jason Mattingley

53.316 **Asymmetric alpha desynchronization during the maintenance of spatial attention** Akiko Ikkai, Sangita Dandekar, Clayton Curtis

53.317 **The influence of target-distractor similarity on perceptual distraction** Jocelyn Sy, Barry Giesbrecht

53.318 **Retinotopically defined parietal regions and their relationship to parietal areas involved in object individuation and identification** Katherine Bettencourt, Yaoda Xu

53.319 **Does covert attention alter perceived contrast? Evidence from gender perception.** Jason Rajsic, Daryl Wilson

53.320 **Perceptual load effect is determined by resource demand and data limitation** Zachary J.J. Roper, Joshua D. Cosman, J. Toby Mordkoff, Shaun P. Vecera

53.321 **Effect of feature and response conflicts on the spatial allocation of attention** Daryl E. Wilson, Yena Bi

53.322 **Saliency changes appearance** Dirk Kerzel, Sabine Born, Josef Schönhammer

53.323 **Decreasing fidelity of peripheral visual information modulates performance on the manual line bisection task** Derick Valadao, Marc Hurwitz, James Danckert

53.324 **A new test of habituation as an account of inhibition of return in spatial attention** Kristie R. Dukewich, James T. Enns

53.325 **Attention-Dependent Hemifield Asymmetries When Judging Numerosity** Nestor Matthews, Sarah Theobald

53.326 **Conceptual Cues for Visual Attention** Davood Gozli, Alison Chasteen, Jay Pratt

53.327 **Eye movements during an enumerating-by-pointing task enhance spatial compression** Courtney Harman, Harry Haladjian, Deb Aks, Zenon Pylyshyn

53.328 **Visual processing speed is modulated by prior knowledge and alertness** Anders Petersen, Signe Vangkilde

53.329 **How recent visual experience modulates what we look at first** Yuan-Chi Tseng, Joshua Glaser, Eamon Caddigan, Alejandro Lleras

Perceptual organization: Segmentation and grouping

Poster Session, Orchid Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.401 **Third Order Edge Statistics Reveal Curvature Dependency** Steven Zucker, Matthew Lawlor, Daniel Holtmann-Rice

53.402 **Context integration across hemispheres in neurons of the visual cortex** Hee-kyoung Ko, Nan R. Zhang, Rüdiger von der Heydt

53.403 **Influence of real and illusory contours on center-surround masking** Patrick J. Hibbeler, Lynn A. Olzak

53.404 **A systematic look at the relationship between texture segregation and center-surround masking.** Jennifer Braun, Patrick Hibbeler, Lynn Olzak

53.405 **Empirical data on the configural architecture of human scene perception and linguistic labels using natural images and ambiguous figures** Lauren Barghout, Haley Winter, Yurik Riegal

53.406 **ERP signatures of Gestalt cues predict perceptual segmentation.** Jennifer Corbett, Thomas Serre

53.407 **A Measure of Localization of Brain Activity for the Motion Aperture Problem using Electroencephalograms** Isao Hayashi, Hisashi Toyoshima, Takahiro Yamanoi

53.408 **Region-based texture segregation and orientation-similarity grouping** Kathleen Vancleef, Tom Putzeys, Elena Gheorghiu, Bart Machilsen, Johan Wagemans

53.409 **Emergent Features in two-line configurations prevent selective attention to individual lines as measured by Garner Interference.** Anna Stupina, Patricia Emert, James Pomerantz

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53.410 **Feature selection as a mechanism for color grouping** Derek Tam, Brian Levinthal, Steven Franconeri

53.411 **Collinearity and Containment Grouping have Different Effects on Object Substitution Masking** Alvin Raj, Ruth Rosenholtz, Benjamin Balas

53.412 **The Perception of Four-Dot Configurations** Mary Portillo, James Pomerantz, Dolapo Sokumbi, Carl Hammarsten

53.413 **After-effect of perceived regularity** Marouane Ouhnana, Jason Bell, Michael J. Morgan, Joshua A. Solomon, Frederick A. A. Kingdom

53.414 **The Rapid Perception of Correlation in Scatterplots** Ronald Rensink

53.415 **Spatial organization and configural processing strategies: From perception to memory** Amy Clements-Stephens, Amy Shelton

53.416 **Perceptual grouping weakens local feature representation** Dongjun He, Fang Fang

53.418 **Closure versus symmetry: rapid competition of two grouping principles in a primed flanker paradigm** Filipp Schmidt, Thomas Schmidt

53.419 **Long-range, pattern-dependent contextual effects in early visual cortex** Sung Jun Joo, Geoffrey Boynton, Scott Murray

Attention: Shifting

Poster Session, Orchid Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.420 **Reducing task switch cost with action video games** Katherine Medford, Michael Sugarman, C. Shawn Green, E. Klobusicky, Daphne Bavelier

53.421 **The Effect of Visual Scanning in Line Bisection** Katsumi Minakata, Yamaya Sosa, Mark E. McCourt

53.422 **Visual relationship judgments** Stacey Parrott, Steven Franconeri

53.423 **Spatial relationship judgment requires selection of each object in turn, even when object identification does not** Kaitlin Turner, Hyejin Yang, Steven Franconeri

53.424 **Tailgate masking: the obliterating effect of the unattended pre-mask** Arielle Veenemans, Patrick Cavanagh

53.425 **Perceived biological agency in a Slithering Snake animation** Tao Gao, Joshua New, Brian Scholl

53.426 **Realization of an Inverse Yarbus Process via Hidden Markov Models for Visual-Task Inference** Amin Haji Abolhassani, James J. Clark

53.427 **Continuously moving RSVP task revealed neuronal activities related to position of spatial attention: an fNIRS study** Masamitsu Harasawa, Hiroshi Ishikane

53.428 **Maintaining visual attention across abrupt spatiotemporal discontinuities: The role of feature information** Markus Huff, Frank Papenmeier, Hauke Meyerhoff, Georg Jahn

Visual search: Elements, cues and configurations

Poster Session, Orchid Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.429 **Visual Search for Motion** Ian Scofield, Eriko Self

53.430 **How do we search when things keep moving? Selection and segregation of dynamic displays in visual search** Todd Horowitz, Anina Rich

53.431 **Faster is more efficient in visual search for motion** David Fencsik, Leigha Wendel, Jeremy Wolfe, Todd Horowitz

53.432 **No Motion Filtering in Visual Search amongst Moving Items** Johan Hulleman, Erin McWilliams

53.433 **On the hunt: Global biological motion information can guide attention efficiently in a visual search task** Sandra Weber, Ayse Saygin

53.434 **How do people quit visual search? Justifications for a deadline model** Louis Chan, William Hayward

53.435 **An optimal termination strategy for dual-target search** Kazuya Ishibashi, Shinichi Kita, Jeremy Wolfe

53.436 **The efficiency of searching for Chinese character in Pseudo characters, false characters and stroke combinations** Jian'e Bai, Lan Wang, Xuchu Weng, Sheng He

53.437 **The Individual and Combined Effects of Spatial Context and Feature Cues in Visual Search** Richelle Witherspoon, Daryl Wilson, Monica Castelhano

53.438 **The Implementation of an Exclusionary Attentional Template: Direct Versus Indirect Cueing** Valerie Beck, Steven Luck, Andrew Hollingworth

53.439 **Parallel learning of multiple target locations in contextual cueing** Markus Conci, Hermann J. Müller

53.440 **Signal Detection Evidence for an Attentional Bottleneck in Spatial Configuration Visual Search** Evan Palmer, David Fencsik, Todd Horowitz, Jeremy Wolfe

53.441 **Interaction between depth and ocularity features in attentional attraction during visual search** Li Zhaoping, Gao Meng, Xiaomeng Zhang

53.442 **Learning to perform efficient visual search: From inefficient search to pop-out in one week** Eric A. Reavis, Sebastian M. Frank, Menghan Zhao, Mark W. Greenlee, Peter U. Tse

53.443 **False Pop Out in Visual Search** Kimberley Orsten, Mary C. Portillo, James R. Pomerantz

53.444 **Boundary conditions of the components of Priming of Pop-out** Dominique Lamy, Amit Yashar

53.445 **Detecting, localizing, and identifying feature singletons in visual search: Does task set influence the speed of pre-attentive processing?** Thomas Töllner, Dragan Rangelov, Hermann J. Müller

53.446 **You don't see what you expect to see: Action-effect blindness for learnt action effects in a visual search task** Roland Pfister, Markus Janczyk, Alexander Heinemann, Andrea Kiesel

53.447 **A Color in Working Memory Does Not Become a Search Target, but it Does Interfere with Color Search.** Michael Stroud, Elina Kaplan, Tamaryn Menneer, Kyle Cave, Nick Donnelly

53.448 **Can semantic information influence the guidance of attention by working memory?** Marissa Calleja, Max Coltheart, Anina Rich

53.449 **Search Asymmetry and Eye Movements in Infants and Adults** Christina Fuda, Scott Adler

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Perceptual learning: Transfer and specificity

Poster Session, Orchid Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.450 **Basic Information Processing Effects from Perceptual Learning in Complex, Real-World Domains** Khanh-Phuong Thai, Philip Kellman

53.451 **Triply Dissociated Learning of Context, Target Orientation and Distractor Orientation in Visual Search** Christophe Le Dantec, Aaron Seitz, Elizabeth Melton

53.452 **Distinct mechanisms for visual shape learning at different time scales** Adrian Garcia, Shu-Guang Kuai, Zoe Kourtzi

53.453 **Learning to See Second Order Information in Shading Patterns** Dicle N Dovencioglu, Andrew J Schofield, Andrew E Welchman

53.454 **Specificity of learning in acquired bias for 3D rotation** Baptiste Caziot, Benjamin T. Backus

53.455 **Attentional Oblique Effect When Judging Simultaneity: A Perceptual Learning Study** Jenna Kelly, Nestor Matthews

53.456 **Perceptual learning effect underlying material categorization tasks** Yukio Nakamura, Takehiro Nagai, Michiteru Kitazaki, Kowa Koida, Shigeki Nakauchi

53.457 **Attentional load effects on visuo-motor learning** Joo-Hyun Song, Patrick Bédard

Perception and action: Locomotion

Poster Session, Vista Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.501 **Steering and Cognition: Does attentional load impede or facilitate steering around a bend?** Georgios Kountouriotis, Natasha Merat, Peter Gardner, Richard Wilkie

53.502 **Non-visual self-motion information influences the perception of object motion while walking** Melissa Parade, Jonathan S. Matthis, Brett R. Fajen

53.503 **A speed control law for pedestrian following based on visual angle** Kevin W. Rio, William H. Warren

53.504 **Corrective response reaction times and multi-motor coordination after countermanding failures** Gordon Tao, Gunnar Blohm

53.505 **Visual control strategies for the interception of moving targets on foot** Romann Weber, Brett Fajen

53.506 **Effects of physical acceleration in the perception of induced self-motion by a real world display** Tatsuya Yoshizawa, Yasumasa Uruno, Tetsuo Kawahara

53.507 **On-line and off-line control of locomotion: Steering a slalom course** Huaiyong Zhao, William Warren

53.508 **Overestimating action capabilities for passing through vertical and horizontal gaps under severely degraded vision** David A. Lessard, Margaret R. Tarampi, Michael N. Geuss, Sarah H. Creem-Regehr, Jeanine K. Stefanucci, William B. Thompson

53.509 **Age-related differences in detection of collision events on linear trajectories** Jennifer Teves, Rui Ni

53.510 **Retinal information influencing heading perception during rotation** Diederick C. Niehorster, Li Li

53.511 **Age-Related Differences in Steering Control under Deteriorated Optical Flow Conditions** Bobby Nguyen, Rui Ni

53.512 **Perceiving path from optic flow** Joseph Cheng, Li Li

53.513 **Improved steering performance with enhanced recruitment of the superior parietal lobe: An fMRI study.** Jac Billington, Richard Wilkie, David Field, John Wann

53.514 **Does Locomotion Enhance the Visual Accessibility of Ramps and Steps?** Tiana M. Bochsler, Christopher S. Kallie, Gordon E. Legge, Rachel Gage, Muzi Chen

53.515 **Are Older Adults' Actions Affected by Their Perceptions When Walking Through Apertures?** Amy Hackney, Michael Cinelli

53.516 **Inconsistent Routes in Moving Obstacle Avoidance Are Due to Sensitivity to Initial Conditions, not Attention** Henry S. Harrison, William H. Warren

53.517 **Vection stimuli placed on a road modulate driver's speed sensation in a real driving scene** Yuki Kawashima, Keiji Uchikawa, Hirohiko Kaneko, Kazuho Fukuda, Kouji Yamamoto, Kenji Kiya

53.518 **Visual control of steering toward a goal** Li Li, Joseph Cheng

53.519 **Visual control of foot placement when walking over rough terrain** Jonathan Matthis, Brett Fajen

53.520 **Age differences negotiating paths of different widths at different speeds: does old age mean "middle of the road"?** Richard Wilkie, Rachael Raw, Georgios Kountouriotis, Mark Mon-Williams

53.521 **Two Modes of Motion Perception: A Double-dissociation of the effects of contrast and field of view on perception of object-motion and self-motion** D Alfred Owens, Xiaoyu Zhang, Alexander Nalbandian, Johnny Lawrence

Object recognition: Experience and learning

Poster Session, Vista Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.522 **Visual benefits from auditory statistical learning: The case of reading** Laura K. Suttle, Nicholas B. Turk-Browne

53.523 **The role of error-driven learning in object categorization by primates and birds** Fabian Soto, Edward Wasserman

53.524 **The effect of familiarity and novelty on visual preference across different object and scene categories** Long Sha, Ming Meng

53.525 **Visual category learning can be accomplished either under ambiguous supervision or low feature saliency, but not under both challenges** Rubi Hammer, Kalanit Grill-Spector

53.526 **The spontaneous appeal by naïve subjects to nonaccidental properties when distinguishing among highly similar members of subspecies of birds generates the experts' birdguide.** Ori Amir, Xiaokun Xu, Irving Biederman

53.527 **Novel object learning depends on rapid eye movement sleep.** Sara C. Mednick, Elizabeth McDevitt, Mark Brady

53.528 **Linking perceptual experience with the functional architecture of the visual cortex** D. Samuel Schwarzkopf, Chen Song, Geraint Rees

53.529 **Effect of stimulus familiarity in visual word recognition tasks** Julia Trommershaeuser, Anna Ma-Wyatt

53.530 **"They must have seen it all along" Hindsight bias in interpersonal cognition via visual priming** Daw-An Wu, Shinsuke Shimojo, Colin Camerer

53.531 **Action Alters Object Identification: Wielding a Gun Creates a Bias to See Guns** James Brockmole, Jessica Witt

53.532 **The effect of holistic versus analytic processing on gender difference in memory** SooJin Park, Jaehyun Han

53.533 **De Bruijn cycles for neural decoding** Marcelo G Mattar, Lucía Magis-Weinberg, Geoffrey K Aguirre

Spatial vision: Summary statistics

Poster Session, Vista Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.534 **The Rapid Extraction of Statistical Properties in Visual Search** John Brand, Chris Oriet

53.535 **Psychophysical evidence for a common metric underlying number and density discrimination** Marc Tibber, John Greenwood, Steven Dakin

53.536 **Density discriminations are less precise than size discriminations, but are not more noisy** Michael Morgan, Steven Dakin

53.537 **A summary-statistic model of the visual periphery predicts the difficulty of visual curve tracing.** Benjamin Balas, Alvin Raj, Ruth Rosenholtz

53.538 **The effect of viewing eccentricity on visual enumeration** Breana Carter, Paul Smith, Melanie Palomares

53.539 **Size discrimination: On the relationship between statistical averaging and crowding** Melanie Palomares, C. Holley Pitts

53.540 **Perceptual averaging by eye and ear: Computing visual and auditory summary statistics from multimodal stimuli** Alice R. Albrecht, Brian J. Scholl, Marvin M. Chun

53.541 **Distractors, sequential presentation have no effect on simultaneous enumeration of multiple sets** Sonia Poltoratski, Yaoda Xu

Spatial vision: Crowding and eccentricity

Poster Session, Vista Ballroom

Tuesday, May 10, 8:15 am - 12:15 pm

53.542 **The extent of the vertical meridian asymmetry** Jared Abrams, Aaron J. Nizam, Marisa Carrasco

53.543 **Contour interaction under monocular and dichoptic viewing conditions for luminance-modulated and contrast-modulated Cs** Monika A Formankiewicz, Sarah J Waugh, Akash S Chima

53.544 **Visual Boundaries Influence the Direction of Biases in Peripheral Localization** Francesca C. Fortenbaugh, Shradha Sanghvi, Michael A. Silver, Lynn C. Robertson

53.545 **Assessment of Damaged and Intact Visual Fields With a New Kind of Perimeter** Antti Raninen, Risto Näsänen

53.546 **Letter-in-chaff: a response classification method for studying letter identification** Julian M. Wallace, Bosco S. Tjan

53.547 **Effects of imposed Gaussian blur on contour interaction for luminance-modulated and contrast-modulated noisy Cs** Sarah J Waugh, Monika A Formankiewicz, Julie A Polczyk-Przybyla

53.548 **The Neural Correlates of Crowding-Induced Changes in Appearance** Elaine Anderson, Steven Dakin, D. Samuel Schwarzkopf, Geraint Rees, John Greenwood

53.549 **Invisible fearful face induced by crowding can capture spatial attention** Juan Chen, Yingchen He, Fang Fang

53.550 **Peripheral crowding with unlimited viewing time** Michael K. Chiu, Julian Wallace, Anirvan S. Nandy, Bosco S. Tjan

53.551 **Can positional averaging explain crowded letter confusions?** Daniel Coates, Jean-Baptiste Bernard, Susana Chung

53.552 **Response bias contributes to visual field anisotropies for crowding in natural scenes** Luis Andres Lesmes, Thomas S.A. Wallis, Peter Bex

53.553 **Effects of target-flanker grouping in crowding inside and outside the critical spacing** Bilge Sayim, Patrick Cavanagh

53.554 **Crowding with invisible flankers** Kilho Shin, Bosco S. Tjan

53.555 **Spatial Frequency and Similarity Modulate Crowding in Letter Identification** Sacha Zahabi, Martin Arguin

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Tuesday Afternoon Talks

Spatial vision: Neural and psychophysical mechanisms

Talk Session, Royal Ballroom 1-3

Tuesday, May 10, 2:30 - 4:30 pm, Moderator: Luke Hallum

2:30 pm 54.11 **Population receptive fields in human visual cortex measured with subdural electrodes** Jonathan Winawer, Andreas M. Rauschecker, Josef Parvizi, Brian A. Wandell

2:45 pm 54.12 **Tomographic measurement of population receptive fields in early visual cortex** David Ress, Clint Greene, Serge O. Dumoulin, Ben Harvey

3:00 pm 54.13 **Second-order selectivity of single units in macaque primary visual cortex (V1) and V2** Luke E. Hallum, J. Anthony Movshon

3:15 pm 54.14 **Failures of inference: challenges for interpreting localized fMRI measurements of visual features** Cheryl Olman

3:30 pm 54.15 **Occipital TMS facilitates and hinders visual perception via a contrast gain mechanism** Francesca Perini, Luigi Cattaneo, Marisa Carrasco, Jens Schwarzbach

3:45 pm 54.16 **Serial dependence in visual perception** Jason Fischer, Jennifer Shankey, David Whitney

4:00 pm 54.17 **The Intrinsic Uncertainty Observer: Explaining Detection and Localization Performance in the Visual Periphery** Melchi Michel, Wilson Geisler

4:15 54.18 **The common perceptual metric for human discrimination of number and density** Steven Dakin, Marc Tibber, John Greenwood, Frederick Kingdom, Michael Morgan

Perception and action: Pointing, hitting, reaching, and grasping

Talk Session, Royal Ballroom 1-3

Tuesday, May 10, 5:30 - 7:15 pm, Moderator: Jody Culham

5:30 pm 55.11 **fMRI reveals a lower visual field preference in dorsal visual stream regions during hand actions** Stephanie Rossit, Teresa McAdam, Adam Mclean, Melvyn Goodale, Jody Culham

5:45 pm 55.12 **Testing whether humans have an accurate model of their own motor uncertainty in a speeded reaching task** Hang Zhang, Nathaniel Daw, Laurence T. Maloney

6:00 pm 55.13 **Recalibration of eye and hand reference frames in age-related macular degeneration** Laura Renninger, Anna Ma-Wyatt

6:15 pm 55.14 **Me or Not Me: Causal Inference of Agency in goal-directed actions** Tobias F Beck, Carlo Wilke, Barbara Wirxel, Dominik Endres*, Axel Lindner, Martin A Giese*

6:30 pm 55.15 **Temporal Aspect of Motor Performance's Effect on Perception** Bruce Bridgeman, Adam Cooper, Cassidy Sterling, Michael Bacon

6:45 55.16 **Anticipation of sabre fencing attacks** Peter Possidente, Flip Phillips, Jon Matthis, Gabriel Diaz

7:00 55.17 **Learning to reach for 'invisible' objects: evidence for 'blindsight' in normal observers.** Warrick Roseboom, Derek Arnold

Attention: Temporal and capture

Talk Session, Royal Ballroom 4-5

Tuesday, May 10, 2:30 - 4:30 pm

Moderator: Steven Franconeri

2:30 pm 54.21 **Flexible visual processing of spatial relationships.** Steven Franconeri, Jason Scimeca, Jessica Roth, Sarah Helseth

2:45 pm 54.22 **Topological change triggers the attentional blink: Evidence for the topological definition of perceptual units** Wenli Qian, Ke Zhou, Lin Chen

3:00 pm 54.23 **Attention capture by unique color changes occurs independent of color singletons** Adrian von Muhlenen, Markus Conci

3:15 pm 54.24 **Top-down attentional capture by associated scenes in an object search task.** Noah Sulman, Thomas Sanocki

3:30 pm 54.25 **Attentional capture vs. emotional capture: Potentially separate mechanisms of perceptual disruption** Lingling Wang, Steven Most

3:45 pm 54.26 **The role of perceptual load in orientation tuning** Moritz Stolte, Bahador Bahrami, Nilli Lavie

4:00 pm 54.27 **Learned control over attention capture is disrupted following medial temporal lobe damage** Joshua Cosman, Shaun Vecera

4:15 54.28 **Target detection at 50 or 33 ms/picture in RSVP** Mary Potter, Brad Wyble, Emily McCourt, Daniel Stofleth

Motion: Integration

Talk Session, Royal Ballroom 4-5

Tuesday, May 10, 5:30 - 7:15 pm

Moderator: Ikuya Murakami

5:30 pm 55.21 **Neural activity underlying the integration of trajectory information** Justin Ales, Anthony Norcia

5:45 pm 55.22 **The effects of size and speed on perceived 3D object motion at different distances** Junjun Zhang, Myron Braunstein, George Andersen

6:00 pm 55.23 **Motion integration and segregation modulated by surrounding motion** Hiromasa Takemura, Satohiro Tajima, Ikuya Murakami

6:15 pm 55.24 **Combination of optic flow fields and stereoscopic depth fields in the encoding of self-motion** Andrew T Smith, Velia Cardin

6:30 pm 55.25 **The Perception of Body Movements: The Role of Biological Motion and Form** Ayse P. Saygin, Thierry Chaminade, Burcu A. Urgen, Hiroshi Ishuguro, Jon Driver, Chris Frith

6:45 55.26 **Seeing the direction of a crowd: Ensemble coding of biological motion** Timothy Sweeny, Steve Haroz, David Whitney

7:00 55.27 **Biological motion detection does not involve an automatic 'perspective taking'** Andrea Christensen, Winfried Ilg, Martin A. Giese

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Tuesday Afternoon Posters

Face perception: High-level features

Poster Session, Royal Palm 6-8

Tuesday, May 10, 3:00 - 7:00 pm

56.301 **Face Processing Abilities Relate to Career Choice** Emily Strong, Richard Russell, Laura Germine, Jeremy Wilmer

56.302 **Reading the Lie in the Eyes: The Production and Detection of Tactical Gaze Deception** Joshua New, Michelle Levine, Chloe Cheimets

56.303 **Neural face coding is shaped by race** Luca Vizioli, Fraser Smith, Junpeng Lao, Lars Muckli, Roberto Caldara

56.304 **No own-race advantage for holistic face processing in Chinese participants** Kate Crookes, William Hayward, Simone Favelle

56.305 **The complete design lets you see the whole picture: Differences in holistic processing contribute to face-inversion and other-race effects** Stephenie A. Harrison, Jennifer J. Richler, Michael L. Mack, Thomas J. Palmeri, William Hayward, Isabel Gauthier

56.306 **The other-race effect is not ubiquitous** Ryo Kyung Lee, Isabelle Bülthoff, Regine Armann, Christian Wallraven, Heinrich Bülthoff

56.307 **Training with Same-Race Faces Improves Holistic Processing of Other-Race Faces** Rogelio J. Mercado, Sarah Cohan, Joseph M. DeGutis

56.308 **Eyes like it, brain likes it: Tracking the neural tuning of cultural diversity in eye movements for faces** Junpeng Lao, Sébastien Miellet, Luca Vizioli, Roberta Fusco, Roberto Caldara

56.309 **Co-localization of human posterior STS during biological motion, face and social perception** Samhita Dasgupta, Sarah C. Tyler, Emily D. Grossman

56.310 **A region in the Posterior Superior Temporal Sulcus (pSTS) appears to be selectively engaged in the perception of social interactions.** Kami Koldewyn, Sarah Weigelt, Kilian Semmelmann, Nancy Kanwisher

56.311 **Visual attractiveness is leaky (3): Effects of emotion, distance and timing.** Eiko Shimojo, Daniela Mier , Shinsuke Shimojo

56.312 **Visual attractiveness is leaky (4): Effects of non-social stimuli and the relationship to distance and timing** Daniela Mier, Eiko Shimojo, Shinsuke Shimojo

56.313 **Visual Attractiveness is Leaky (5): Perceptual organization matters** Chihiro Saegusa, Janis Intoy, Shinsuke Shimojo

56.314 **pSTS response to gaze reflects wider role in processing ostensive signals in multiple modalities** Raliza S. Stoyanova, Michael P. Ewbank, Andy J. Calder

56.315 **Faces with higher contrast look younger** Aurelie Porcheron, Emmanuelle Mauger, Frederique Morizot, Richard Russell

56.316 **Top-down Visual Attention and Gender in a Focused Listening Task** John Shen, Laurent Itti

Development: Face perception

Poster Session, Royal Palm 6-8

Tuesday, May 10, 3:00 - 7:00 pm

56.317 **Visual scanning behaviors of 8-month-old infants facing expressive faces** Jean-Yves Baudouin, Karine Durand, Jennifer Monnot, Robert Soussignan, Benoist Schaal

56.318 **Mechanisms Underlying the Emergence of Expert Face and Object Representations During Infancy** Hillary Hadley, Lisa S. Scott

56.319 **Infants' recognition of dynamic subtle facial expression** Hiroko Ichikawa, So Kanazawa, Masami K. Yamaguchi

56.320 **Do infant represent the facial identity in a viewpoint-invariant manner? The neural adaptation study as measured by near-infrared spectroscopy** Megumi Kobayashi, Yumiko Otsuka, So Kanazawa, Masami K. Yamaguchi, Ryusuke Kakigi

56.321 **A longitudinal study on infants' face perception by near-infrared spectroscopy.** Emi Nakato, Hiroko Ichikawa, So Kanazawa, Masami.K Yamaguchi, Ryusuke Kakigi

56.322 **Jen or Sue? The influence of facial expressions on identity aftereffects in 8-year-old children** Jasmine Mian, Catherine Mondloch

56.323 **The attractiveness of facial avergeness: A comparison of adults and children** Larissa Vingilis-Jaremko, Daphne Maurer, David Feinberg

56.324 **Look me in the eye: A comparison of fine-grained sensitivity to eye contact between 8-year-olds and adults** Mark Vida, Daphne Maurer

56.325 **Developmental changes in encoding and the capacity to process face information.** Rebecca J. Von Der Heide, Michael J. Wenger, Rick O. Gilmore, Daniel B. Elbich

56.326 **The effect of gaze direction on 3D face learning in infants** Wakayo Yamashita, So Kanazawa, Masami K. Yamaguchi

56.327 **Six-month-old infants perceive the concave face illusion as convex.** Sherryse Corrow, Jordan Mathison, Carl Granrud, Albert Yonas

56.328 **Infant and Adult Preferences for Upright Faces are Driven More by High, Than Low, Spatial Frequencies** Karen Dobkins, Vanitha Sampath

56.329 **The Organization of Young Children's Face Space: Complete Transfer of Aftereffects from Own- to Other-Race Faces in 5-Year-Olds** Lindsey Short, Catherine Mondloch

56.330 **Developmental Changes in the Strength of Identity-Specific Expression Aftereffects** Susan Barrett, Katrina Hermetet, Alice O'Toole

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Visual search: Natural scenes and practical tasks

Poster Session, Orchid Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.401 **Scene-based Contextual Cueing in the Rhesus Macaque** Daniel Brooks, Ji Dai, David Sheinberg

56.402 **Costs of Switching Scene Category in Real-World Visual Search** Kevin Price, Satoru Suzuki, Marcia Grabowecky

56.403 **The Evolution of Clutter Effects in Visual Search** Gregory Zelinsky, Mark Neider

56.404 **Redundancy gains using real-world objects** Alain Chavaillaz, Gregory Zelinsky

56.405 **Is there inter-trial priming of popout with pictures of real stimuli?** Ester Reijnen, Michael Zehetleitner, Hermann J. Müller, Joseph Krummenacher

56.406 **Depth and Size Information Reduce Effective Set Size for Visual Search in Real-World Scenes** Ashley M. Sherman, Michelle R. Greene, Jeremy M. Wolfe

56.407 **Searching Simulated Lungs in 3D with Stereoscopic Volume Rendering** Jeffrey Doon, David Getty, Ennio Mingolla, Jeremy Wolfe

56.408 **When and why does Computer Aided Detection (CAD) interfere with visual search?** Corbin Cunningham, Trafton Drew, Jeremy M. Wolfe

56.409 **Why don't Computer Aided Detection (CAD) algorithms help experts as much as they should?** Trafton Drew, Corbin Cunningham, Jeremy M. Wolfe

56.410 **What Events are Critical for a Lifeguard to Monitor? An Examination of Responses by Instructors, Lifeguards, and Non-Lifeguards** Lyndsey K. Lanagan-Leitzel

56.411 **Accuracy in dual-target visual search is hindered by anticipatory anxiety** Matthew S. Cain, Joseph E. Dunsmoor, Kevin S. LaBar, Stephen R. Mitroff

Visual search: Neural mechanisms

Poster Session, Orchid Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.412 **TMS reveals attentional feedback to area V1 during serial visual search** Laura Dugué, Philippe Marque, Rufin VanRullen

56.413 **The role of V5/MT in visual search amongst moving items: new evidence from transcranial magnetic stimulation** Gorana Pobric, Johan Hulleman

56.414 **Attentional priority of saccade goal selection during visual search is represented by the relative normalized responses of lateral intraparietal neurons** Koorosh Mirpour, James Bisley

56.415 **Neural activity in the parietal priority map explains saccadic reaction times.** Solmaz Shariat Torbaghan, Daniel Yazdi, Koorosh Mirpour, James W. Bisley

56.416 **fMRI evidence for the neural representation of target detection in natural scenes** Fei Guo, Tim Preston, Barry Giesbrecht, Miguel Eckstein

56.417 **ERP correlates of the target representation used to guide search** Joseph Schmidt, Annmarie MacNamara, Gregory Hajcak, Gregory Zelinsky

56.418 **fMRI responses during visual search predict the magnitude of EEG and behavioral benefits of repeated context** Ryan W. Kasper, Joyce Sato-Reinhold, Scott T. Grafton, Miguel P. Eckstein, Barry Giesbrecht

3D perception: Natural and virtual scenes

Poster Session, Orchid Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.419 **Depth Compression and Expansion in Photographs** Emily A. Cooper, Elise Piazza, Martin S. Banks

56.420 **Measuring pictorial space in paintings: Converging operations** Johan Wagemans, Andrea van Doorn, Huib de Ridder, Mieke Leyssen, Jan Koenderink

56.421 **Depth-of-field in (semi-)natural photographs** Harold Nefs

56.422 **A dense sampling method for calibrating non-see-through head mounted displays** Andrew Glennerster, Stuart Gilson, Andrew Fitzgibbon

56.423 **The influence of a scaled third-person animated avatar on perception and action in virtual environments** Markus Leyrer, Sally A. Linkenauger, Heinrich H. Bülthoff, Uwe Kloos, Betty Mohler

56.424 **Welcome to Wonderland: The Apparent Size of the Body Influences Perceived Extents in Virtual Environments** Sally A. Linkenauger, Betty J. Mohler, Heinrich H. Bülthoff

56.425 **Bringing the real world into the fMRI scanner: Robust release from adaptation for 2D pictures but not actual 3D objects** Jacqueline Snow, Charles Pettypiece, Teresa McAdam, Adam McLean, Patrick Stroman, Melvyn Goodale, Jody Culham

56.426 **Human recovery of the shape of a 3D scene** Taekyu Kwon, Yun Shi, Yunfeng Li, Tadamasa Sawada, Zygmunt Pizlo

56.427 **3D symmetry correspondence from 2D images of objects** Yunfeng Li, Tadamasa Sawada, Meng Yi, Longin Jan Latecki, Zygmunt Pizlo

56.428 **On the role for binocular cues in the fast extraction of egocentric distance** Noah Cohen, Daniel Gajewski, Nazanin Dameshghi, John Philbeck

56.429 **The role of depth and frontal planes in perceiving distances in a virtual environment.** Michael Geuss, Garret Allen, Jeanine Stefanucci, Sarah Creem-Regehr, William Thompson

56.430 **Two distinct angular perceptual variables account for the dissociation between egocentric and exocentric distance perception** Frank Durgin, Zhi Li

56.431 **Manipulating Embodiment in Imagined Spatial Perspective Taking** Kyle T. Gagnon, Margaret R. Tarampi, Mackenzie S. Peyton, Sarah H. Creem-Regehr

56.432 **View-based vs Cartesian: explanations for human navigation errors** Lyndsey Pickup, Stuart Gilson, Andrew Glennerster

56.433 **The influence of object-ground contact on perception of distance and size under severely degraded vision** Kristina Rand, Margaret Tarampi, William Thompson, Sarah Creem-Regehr

56.434 **An older view on distance perception: Age affects perception of walkable extents** Mila Sugovic, Jessica Witt

Scene perception: Features and categories

Poster Session, Orchid Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.435 **Neural coding of location and facing direction on a familiar college campus** Lindsay Morgan, Geoffrey Aguirre, Russell Epstein

56.436 **Diagnostic Objects Facilitate Scene Categorization** Anthony Stigliani, Sean MacEvoy, Russell Epstein

56.437 **Normal scenes seem to last longer than jumbled scenes** D. Alexander Varakin

56.438 **On the speed of material recognition in natural scenes** Christiane Wiebel, Matteo Valsecchi, Karl Gegenfurtner

56.439 **Ordinate and Subordinate Level Categorizations of Real-World Scenes: An Eye Movement Study** George L. Malcolm, Antje Nuthmann, Philippe G. Schyns

56.440 **A new perceptual paradigm and psychophysical evidence for hierarchical gist recognition** Ilan Kadar, Ohad Ben-Shahar

56.441 **Responding to the gist of unseen scenes** Karla Evans, Jeremy Wolfe

56.442 **Natural scenes are robust to bubbling** Eamon Caddigan, Li Fei-Fei, Diane M. Beck

56.443 **Varying image perspective weakens the leaning tower illusion.** Aaron Johnson

56.444 **Perceiving multiple scene events at the grand time scale of seconds** Thomas Sanocki, Noah Sulman

56.445 **Does language influence how visual events are perceived?** Gaurav Kharkwal, Karin Stromswold

56.446 **Sensitivity to the aesthetic value of scenes in the parahippocampal place area** Teresa Pegors, Russell Epstein

56.447 **Tuning of human occipitotemporal cortex to sensory, semantic and emotional features during visualisation** Daniel Mitchell, Rhodri Cusack

56.448 **Natural Scene Image Complexity Differentially Modulates the N1 and P1 Components of Early VEPs** Bruce C Hansen, Aaron P Johnson, Dave Ellemberg

56.449 **Dissociating object and space representations in scene-selective visual cortex** Assaf Harel, Dwight Kravitz, Chris Baker

56.450 **The occipital lobe in detection and categorization abilities: an fMRI study in healthy individuals** Sylvie Chokron, Céline Cavézian, Carole Peyrin, Gaelle Doucet, Olivier Coubard, Julien Savatovsky, Francoise Heran, Olivier Gout, Céline Perez

56.451 **Detection and categorization abilities following peripheral or cerebral visual impairment** Céline Cavézian, Isabelle Gaudry, Anne-claire Viret, Olivier Coubard, Carole Peyrin, Catherine Vignal, Olivier Gout, Sylvie Chokron

56.452 **Evidence of a coarse-to-fine categorization of visual scenes using movies of spatial frequency filtered scene images** Benoit Musel, Coralie Giavarini, Alan Chauvin, Nathalie Guyader, Carole Peyrin

Development: Disorders

Poster Session, Vista Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.501 **Computerized Progressive Attention Training (CPAT) in adults with ADHD – A randomized controlled trial** Lilach Shalev, Yael Ashkenazy, Yarden Dody, Michal Gilad, Tamar Kolodny, Moran Pharchi

56.502 **The Relationship of Global Form and Coherent Motion Detection to Reading Fluency** Julia Englund, Melanie Palomares

56.503 **Increased Internal Noise Cannot Account for Motion Coherence Processing Deficits in Migraine** Kathryn Webster, J. Edwin Dickinson, Josephine Battista, Allison M. McKendrick, David R. Badcock

56.504 **Larger BOLD responses to visual stimulation in area V1 in people with migraine with aura.** Ritobrato Datta, John A. Detre, Geoffrey K. Aguirre, Brett L. Cucchiara

56.505 **Reduced Looming Sensitivity in Primary School Children with Developmental Co-ordination Disorder** Catherine Purcell, John Wann, Damian Poulter, Kate Wilmut

56.506 **The effects of saccades on magnocellular visual function in high and low autistic tendency** David Crewther, Daniel Crewther, Sheila Crewther

56.507 **Basic mechanisms of visual attention are normal in Asperger's syndrome** Jens Christiansen, Anders Petersen, Thomas Habekost, Lennart Pedersen, Claus Bundesen

56.508 **Enhanced global integration of closed contours in individuals with high levels of autistic traits** Renita Almeida, J. Edwin Dickinson, Murray Maybery, Johanna Badcock, David Badcock

56.509 **Integration of disparity and texture cues to slant in adolescents with an autism spectrum disorder.** Rachael Bedford, Elizabeth Pellicano, Katarina Begus, Denis Mareschal, Marko Nardini

56.510 **Gaze and preference decision making in autism** Alma Gharib, Daniela Mier, Ralph Adolphs, Shinsuke Shimojo

56.511 **Biological motion perception among persons with schizophrenia** Justine M. Y. Spencer, Allison B. Sekuler, Patrick J. Bennett, Bruce K. Christensen

Object recognition: Categories

Poster Session, Vista Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.512 **Basic-level object categorization of natural scenes in the near-absence of focal attention** Marlène Poncet, Leila Reddy, Michèle Fabre-Thorpe

56.513 **Rapid visual categorization of objects in natural scenes: the "contextual effect" is strengthened by aging** Laure Saint-Aubert, Florence Rémy, Nadège Bacon-Macé, Emmanuel Barbeau, Nathalie Vayssière, Michèle Fabre-Thorpe

56.514 **Scanning parameters for optimal decoding in visual cortex using a 32-channel head coil for fMRI** Andrew C. Connolly, Yu-Chien Wu, J. Swaroop Guntupalli, James V. Haxby

56.515 **Visual representations of temporal context** Nicholas B. Turk-Browne, Per B. Sederberg, Mason G. Simon

56.516 **The neural basis of rapid visual recognition: Neural decoding and Granger causality analysis of connectivity.** Ali Arslan, Jed Singer, Maxime Cauchoix, Joseph Madsen, Gabriel Kreiman, Thomas Serre

56.517 **The Bank of Standardized Stimuli (BOSS): a new normative dataset of 480 visual stimuli to be used in visual cognition research** Mathieu Brodeur, Geneviève Dion-Lessard, Mélissa Chauret, Emmanuelle Dionne-Dostie, Tina Montreuil, Martin Lepage

56.518 **Integral dimensions can be differentiated in dimensional but not polar morphspaces** Jonathan Folstein, Isabel Gauthier, Thomas Palmeri

56.519 **Self reference and familiarity in handwriting recognition** Walter Gerbino, Elisa Mattaloni

56.520 **Selection of response candidates during the process of object categorization is based on similarity in intrinsic part structure** Mijke Hartendorp, Stefan Van der Stigchel, Albert Postma

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56.521 **A Neural Network Model for the Concurrent Perception of Multiple Objects** Cynthia M. Henderson, James L. McClelland

56.522 **Left hemisphere advantage in the visual processing of graspable objects** Brad Kempster, Claudia Gonzalez

56.523 **Activation of visual information by verbal versus nonverbal cues** Gary Lupyan

56.524 **Unraveling ultra-rapid categorization** Michael Mack, Thomas Palmeri

56.525 **Reentrant Visual Processing Affects Rapid Object Categorization in Natural Scenes** Hsin-Mei Sun, Robert Gordon

56.526 **Priming of superordinate categorization of object pictures by spatial-frequency filtered versions** Katrien Torfs, Sven Panis, Johan Wagemans

56.527 **The Scene Superiority Effect: Discriminating Objects and Instances** Richard Yao, Daniel Simons

56.528 **The effect of eccentricity on working memory for different object categories** Sang-Ah Yoo, Sang Chul Chong

56.529 **Higher-order image statistics is a cue for animal detection** Hayaki Banno, Jun Saiki

Object recognition: Features

Poster Session, Vista Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.530 **Micro-Valence: Nominally neutral visual objects have affective valence** Sophie Lebrecht, Moshe Bar, David L. Sheinberg, Michael J. Tarr

56.531 **Unraveling the visual and semantic components of object representation** Daniel Leeds, Darren Seibert, John Pyles, Michael Tarr

56.532 **Viewpoint and Exemplar Generalization in Visual Prediction** Olivia Cheung, Moshe Bar

56.533 **The word length effect in virtual hemianopia, real hemianopia, and alexia** Claire Sheldon, Mathias Abegg, Alla Sekunova, Jason Barton

56.534 **Greater Sensitivity to Nonaccidental than Metric Differences in Relations** Jiye G. Kim, Irving Biederman, Ori Amir

56.535 **The Benefit of Scene-Like Interactions on Object Identification Arises in LO Rather than Being a Consequence of Parietal Attentional Modulation** Irving Biederman, Jiye G. Kim, Chi-Hung Juan

56.536 **Extrinsic reference frames modify the neural encoding of object locations during active spatial navigation** Edgar Chan, Oliver Baumann, Mark Bellgrove, Jason B Mattingley

56.537 **Different temporal dynamics of topological and projective geometrical perceptions in primary visual cortex: a TMS study** Xiaoming Du, Ke Zhou, Lin Chen

56.538 **The composition of context: assessing the contribution of different types of scene information in visual object recognition** Elan Barenholtz, Evangelie Daskagianni

56.539 **Diagnostic features are prominent in object representations** Mary Bravo, Hany Farid

56.540 **Attention is Directed to Distinguishing Features During Object Recognition** Orit Baruch, Ruth Kimchi, Morris Goldsmith

56.541 **Dorsal stream involvement in object recognition with temporal salience, but not when temporal salience is reduced.** Sheila Crewther, Alana Cross, Tomas Lourenco, Robin Laycock

56.542 **How well do you know the back of your hand? Reaction time to identify a rotated hand silhouette depends on whether it is interpreted as a palm or back view.** Richard Dyde, Kevin MacKenzie, Laurence Harris

56.543 **Stimulus Similarity and Dimensionality in the Processing of Non-Face Objects** David Alexander Kahn, Geoffrey Karl Aguirre

56.544 **Misbinding of color and motion: Effect of color variation and solidity of object** Ashley Watson, Naul Paz, Catherine Tran, Eriko Self

56.545 **Constraints on object perception influence assimilation of objects into the body representation** Silas Larsen, Thomas Carlson

56.546 **Analysis of similarity matrices and its application to the study of semantic and visual information processing in the inferior temporal cortex** Imri Sofer, Daphna Weinshall, Thomas Serre

56.547 **Holistic processing of words** Alan C.-N. Wong, Cindy Bukach, W. S. Yuen, Shirley Leung, Emma Greenspon

56.548 **Spatial sampling may determine channel scaling in letter recognition** Cong Yu, Jun-Yun Zhang, Lei Liu

Attention: Divided

Poster Session, Vista Ballroom

Tuesday, May 10, 3:00 - 7:00 pm

56.549 **Divided attention impairs motion perception in older adults.** Harriet Allen, Tim Ledgeway, Natalie Kelly, Claire Hutchinson, James Blundell

56.550 **Pedestrians, Automobiles, and Cell Phones; Examining the Effects of Divided Attention and Aging in a Realistic Virtual Reality Street Crossing Task** Mark Neider, John Gaspar, Jason McCarley, James Crowell, Henry Kaczmarski, Arthur Kramer

56.551 **Does stress enhance or impair selective attention? The effects of stress and perceptual load on distractor interference** Jun Kawahara, Hirotsune Sato, Ippei Takenaka

56.552 **Evidence for the independence of pre-saccadic attentional shifts and voluntary attention** Donatas Jonikaitis, Marc Päpper, Heiner Deubel

56.553 **Psychoanatomy of visual attention: a unified account of quadrant and hemifield effects.** Thomas Carlson, Haena Cho , Jeremy Turret, Steven Dakin

56.554 **In Defense of Media Multitasking: No Increase in Task-Switch or Dual-Task Costs** Reem Alzahabi, Mark W. Becker

56.555 **Object identification has fixed capacity: Evidence for serial processing in the formation of perceptual objects** Alec Scharff, John Palmer, Cathleen M. Moore

56.556 **The effects of dividing attention on target enhancement and distractor inhibition** Paige Scalf, Diane Beck

56.557 **Consolidation and Maintenance Processes in Visual Working Memory Lack an Extra Capacity for a Peripheral Pop-out Whereas Recognition Does Not** Hae-In Kang, Joo-Seok Hyun

56.558 **Seated, standing, and stepping: Is the size of the useful field of view constant?** James Reed-Jones, Rebecca Reed-Jones, Mark Hollands

Wednesday Morning Talks

Temporal processing

Talk Session, Royal Ballroom 1-3

Wednesday, May 11, 8:00 - 9:45 am, Moderator: Derek Arnold

8:00 am 61.11 **VEP study of receptive field sizes and feedback in human cortex** Yury Petrov, Jeff Nador, Jiehui Qian

8:15 am 61.12 **Time to contact does not pop out** Eli Brenner, Alex Holcombe

8:30 am 61.13 **How well can we discriminate between stimulus onsets and offsets?** Christopher R.L. Cantor, Clifton M. Schor

8:45 am 61.14 **Introspecting on the timing of one's actions in a visuo-motor synchronization task** Andrei Gorea, Delphine Rider

9:00 am 61.15 **A high temporal resolution and long-range mechanism that identifies which motion directions occur at the same time.** Kazushi Maruya, Alex Holocombe, Shin'ya Nishida

9:15 am 61.16 **The weight of time: implied gravitational force enhances discrimination of visual motion duration** Alessandro Moscatelli, Francesco Lacquaniti

9:30 am 61.17 **Recalibrating Time Perception** Derek Arnold, Kielan Yarrow, Szonya Durant, Warrick Roseboom

Face perception: Parts and wholes

Talk Session, Royal Ballroom 4-5

Wednesday, May 11, 8:00 - 9:45 am, Moderator: Allison Sekuler

8:00 am 61.21 **Multiple indices of holistic processing are uncorrelated with each other and with face identification** Yaroslav Konar, Patrick J. Bennett, Allison B. Sekuler

8:15 am 61.22 **Dissociation between general holistic processing and holistic face processing: evidence from three cases of acquired prosopagnosia** Thomas Busigny, Jason Barton, Bruno Rossion

8:30 am 61.23 **Face-semblance leads to faster visual search and breaking interocular suppression** Hua Yang, Jason Gors, Ming Meng

8:45 am 61.24 **Fixating the Eyes is an Optimal Strategy Across Important Face (Related) Tasks** Matthew F Peterson, Miguel P Eckstein

9:00 am 61.25 **Local Jekyll and global Hyde: The dual identity of face identification** Sébastien Miellet, Roberto Caldara, Philippe G. Schyns

9:15 am 61.26 **Kin recognition based on viewing photographs of children's faces is not affected by facial inversion** Laurence Maloney, Maria Dal Martello

9:30 am 61.27 **The Moving Window Technique: A window into age-related changes in children's attention to facial expressions of emotion** Elina Birmingham, Tamara Meixner, Daniel Smilek, Grace Iarocci, Jim Tanaka

Object recognition and scene perception: Neural mechanisms

Talk Session, Royal Ballroom 1-3

Wednesday, May 11, 10:45 - 12:30 pm, Moderator: Li Fei-Fei

10:45 am 62.11 **Closely overlapping responses to tools and hands in the left lateral occipitotemporal cortex.** Stefania Bracci, Cristiana Cavina-Pratesi, Magdalena Ietswaart, Alfonso Caramazza, Marius V Peelen

11:00 am 62.12 **STMVPA: Spatiotemporal multivariate pattern analysis permits fine-grained visual categorization** Sergey V. Fogelson, Peter J. Kohler, Michael Hanke, Yaroslav O. Halchenko, James V. Haxby, Richard H. Granger, Peter U. Tse

11:15 am 62.13 **Feedback of visual object information to cortex representing the "preferred retinal locus", not the fovea, in individuals with macular degeneration** Daniel D. Dilks, Joshua B. Julian, Nancy Kanwisher

11:30 am 62.14 **Translation Invariance of Natural Scene Categories** Marius Cătălin Iordan, Christopher Baldassano, Dirk B. Walther, Diane M. Beck, Li Fei-Fei

11:45 am 62.15 **Early vs. late components of category selectivity in the parahippocampal place area: A rapid acquisition fMRI study** Seth Bouvier, Russell Epstein

12:00 pm 62.16 **Neural coding of the size of space and the amount of clutter in a scene** Soojin Park, Talia Konkle, Aude Oliva

12:15 pm 62.17 **Contextual location information relevant to visual search in natural scenes is encoded in extrastriate visual cortex and the anterior intraparietal sulcus** Tim Preston, Fei Guo, Barry Giesbrecht, Miguel Eckstein

Visual search

Talk Session, Royal Ballroom 4-5

Wednesday, May 11, 10:45 - 12:30 pm

Moderator: Yaffa Yeshurun

10:45 am 62.21 **Searching for many things at the same time: Saved by a log** Jeremy Wolfe

11:00 am 62.22 **Neural correlates of central versus peripheral target detection during complex visual search** Sandra Utz, Glyn W Humphreys, Joseph P McCleery

11:15 am 62.23 **Modeling Combined Proximity-Similarity Effects in Visual Search** Tamar Avraham, Yaffa Yeshurun, Michael Lindenbaum

11:30 am 62.24 **Does crowding obscure the presence of attentional guidance in contextual cueing?** Steven Fiske, Thomas Sanocki

11:45 am 62.25 **Measuring the handoff of the attentional template from working memory to long-term memory** Nancy Carlisle, Geoffrey Woodman

12:00 pm 62.26 **Search and Destroy: A new approach to understanding inhibition in visual search** Jeff Moher, Howard Egeth

12:15 pm 62.27 **Does repeated search in scenes need memory? When contextual guidance fails, memory takes over.** Melissa Vo, Jeremy Wolfe

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Wednesday Morning Posters

Motion: Higher-order, objects, and illusions

Poster Session, Royal Palm 6-8

Wednesday, May 11, 8:15 am - 12:15 pm

63.301 **The nature and the role of colour information in motion processing** Mark Edwards, Alexander Coningham, Rebecca Rae-Hodgson

63.302 **Asymmetric Effects of Spatial Suppression on First- and Second-Order Motion** Davis M. Glasser, Duje Tadin

63.303 **Detection of object motion during self-motion: psychophysics and neuronal substrate** Finnegan Calabro, Lucia-Maria Vaina

63.304 **Deficit of Temporal Dynamics of Detection of a Moving Object During Egomotion in a Stroke Patient: A Psychophysical and Meg Study** Lucia-Maria Vaina, Kunjan D Rana, Ferdinando Buonanno, Finnegan Calabro, Matti Hamalainen

63.305 **Extrastriate cortical activity reflects segmentation of motion into independent sources** Gideon Caplovitz, Peter Tse

63.306 **Perception of Motion in Natural Scenes** Henry Galperin, Dmitriy Lisitsyn, Peter Bex, Jozsef Fiser

63.307 **Bistable Apparent Motion Axis Determined by Axis of Surrounding Object** Allan Dobbins, Lesley Bryant, Alexander Zotov

63.308 **Making predictions from kinematics and causal intuitions: a dissociation between judged causality and imagined locations** Florent Levillain, Luca Bonatti

63.309 **Representation of stimulus identity in apparent motion** Edmund Chong, Won Mok Shim

63.310 **Apparent phi-motion in sequences of Eisenstein's October** Sebastian Pannasch, Daniel Selden, Boris Velichkovsky, Bruce Bridgeman

63.311 **Shifting selection may control apparent motion** Yangqing Xu, Steven Franconeri

63.312 **Representational Momentum Varies Across Objects** Adam Doerrfeld, Maggie Shiffrar

63.313 **A novel variant of the Ouchi-Spillmann illusion** Ali Najafian Jazi, Jorge Otero-Millan, Stephen Macknik, Susana Martinez-Conde

63.314 **Perception of intentions and mental states in autonomous virtual agents** Peter Pantelis, Steven Cholewiak, Paul Ringstad, Kevin Sanik, Ari Weinstein, Chia-Chien Wu, Jacob Feldman

63.315 **Which kinds of motion silence awareness of visual change?** Jordan Suchow, George Alvarez

63.316 **Asymmetric spatial distortions of moving objects** Gerrit Maus, Jingna Li, David Whitney

63.317 **Collisions are seen before they are heard** Nicole Wurnitsch, Gerrit Maus, Paul F. Bulakowski, David Whitney

Perceptual organization: Mechanisms and models

Poster Session, Royal Palm 6-8

Wednesday, May 11, 8:15 am - 12:15 pm

63.318 **Visual adaptation of causality** Michael Dambacher, Martin Rolfs, Patrick Cavanagh

63.319 **Adaptive cue combination in a visual estimation task** Mordechai Z. Juni, Todd M. Gureckis, Laurence T. Maloney

63.320 **Leftward Prism Adaptation Increases Sensitivity to Local Cues in Healthy Individuals** Scott Reed, Paul Dassonville

63.321 **Perceptual Grouping Gives Rise to Object Perception: Evidence from Psychophysical Reverse Correlation** Adam S. Greenberg, Marlene Behrmann

63.322 **How much contrast information is needed for reliable fast image recognition ?** Daniele Benedetti, Federica Cello, Rachele Agostini, Giovanni Punzi, Maria Michela Del Viva

63.323 **Image recognition is based on efficiently coded features** Maria Michela Del Viva, Daniele Benedetti, Giovanni Punzi

63.324 **A Universal Retinotopic Mapping of V1 with Respect to Anatomy** Noah C Benson, Omar H Butt, Ritobrato Datta, David H Brainard, Geoffrey K Aguirre

63.325 **Specific functional asymmetries of the human visual cortex revealed by functional Near-Infrared Spectroscopy.** Maryse Lassonde, Danielle Bastien, Anne Gallagher, Julie Tremblay, Phetsamone Vannasing, Franco Lepore

63.326 **Multi-focal and phase-encoded retinotopy compared** Omar H Butt, Noah C Benson, Ritobrato Datta, David H Brainard, Geoffrey K Aguirre

63.327 **A time window for temporal facilitation** Maria Lev, Uri Polat

63.328 **Mechanism(s) for Apprehending Numerosity based on several Visual Properties** Charles Wright, Charles Chubb, Elhum Shamshiri, Megan Wang

63.329 **The integration of color information in symmetry detection** Chia-Ching Wu, Chien-Chung Chen

Visual memory: Capacity and resolution

Poster Session, Orchid Ballroom

Wednesday, May 11, 8:15 am - 12:15 pm

63.401 **The tradeoff between memory capacity and precision is weaker in recall than in discrimination** Viljami Salmela, Meri Lähde, Jussi Saarinen

63.402 **A Biased-Competition Account of Visual Working Memory Performance** Stephen M. Emrich, Susanne Ferber

63.403 **Perceptual grouping enables multiple items to be stored within a single slot in visual working memory** David E. Anderson, Edward Awh

63.404 **Competition for working memory resources depends on the kind of stimuli being remembered** Michael A. Cohen, Ken Nakayama, Talia Konkle, George Alvarez

63.405 **Capacity & Resolution Trade Off in Iconic Memory but not in Working Memory** Weiwei Zhang, Steven Luck

63.406 **Visual working-memory capacity is unbounded** Ansgar Endress, Mary Potter

63.407 **Forgetting in Visual Working Memory** Melonie Williams, Sang Hong, Geoffrey Woodman

63.408 **Sensory information in iconic memory can be used to improve decision-making.** Alexandra Vlassova, Joel Pearson

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63.409 **An Ensemble Group Functions As a Single Item for Attention and Memory** Justin Halberda

63.410 **Spatial working memory load affects counting but not subitizing in enumeration** Tomonari Shimomura, Takatsune Kumada

63.411 **Correspondence problems limit visual working memory** Jonathan Flombaum, Gi Yeul Bae

63.412 **Visual working memory performance with contrast and external noise: A load-dependent perceptual template model account.** Ryan Najima, Barbara Dosher, Wilson Chu, Zhong-Lin Lu

63.413 **Using color cues to probe the influence of grouping in visual working memory for spatial locations** Michael D. Patterson, WanTing Low

63.414 **Individual differences in VWM capacity assessed by the flicker task** Hrag Pailian, Justin Halberda

63.415 **Working memory capacity predicts individual differences in perception of a bistable figure** Elizabeth Allen, Andrew Mattarella-Micke, Steven Shevell, Sian Beilock

63.416 **Contralateral delay activity duiring visual working memory reveals not only number but also precision of maintained representations** Maro Machizawa, Crystal Goh, Jon Driver

63.417 **Estimates of working memory capacity reflect recall precision not how many items are stored** Paul Bays, Emma Wu, Masud Husain

63.418 **Neural measures reveal similar capacity limits for both present and absent information** Hiroyuki Tsubomi, Keisuke Fukuda, Edward K. Vogel

63.419 **Individual differences in the ability to restrict the breadth of attention are correlated with visuospatial working memory capacity** Leon Gmeindl, Lisa N. Jefferies, Steven Yantis

63.420 **Capacity and resolution for approximate number in perception and memory** Hee Yeon Im, Weiwei Zhang, Justin Halberda

63.421 **Visual Working Memory for Motion Sequences** Nahid Zokaei, Nikos Gorgoraptis, Bahador Bahrami, Paul Bays, Masud Husain

63.422 **The Effect of Visual WM Capacity on Attentional Selection** Darlene Archer, Joy Geng

Attention: Emotion

Poster Session, Orchid Ballroom

Wednesday, May 11, 8:15 am - 12:15 pm

63.423 **Angry faces hold the eyes only to be avoided later: evidence from inhibition of return** Artem Belopolsky, Jan Theeuwes

63.424 **Does the Threat Advantage Hypothesis Extend to Static Body Postures?** Ashley Blanchard, Maggie Shiffrar

63.425 **On the time course of exogenous cuing by the emotional faces** Shwu-Lih Huang, Hung-Ta Chung, Yu-Chieh Chang

63.426 **Do Observers' Negative Self-Evaluations of Their Own Bodies Mediate Their Visual Attention Towards Other Bodies?** Christina Joseph, Maggie Shiffrar

63.427 **Emotion-induced blindness elicits no lag-1 sparing** Briana L. Kennedy, Steven B. Most

63.428 **Pick me! Pick me! How do humans forage in a visual search task?** Erica Kreindel, Jeremy M. Wolfe

63.429 **The influence of aversive natural images on visual processing and awareness** Anke Haberkamp, Kathrin Niederprüm, Thomas Schmidt

63.430 **The Emotional Blink in Novice Meditators** Marcia Grabowecky, Laura Ortega, Chika Nwosu, Satoru Suzuki, Eric Smith, Laiah Factor

Attention: Reward

Poster Session, Orchid Ballroom

Wednesday, May 11, 8:15 am - 12:15 pm

63.431 **Interactions between Reward, Feedback, and Timing Structures on Dual-Target Search Performance** Kait Clark, Matthew S. Cain, R. Alison Adcock, Stephen R. Mitroff

63.432 **Prosaccades and antisaccades under risk: penalties, rewards, and their spatial effects.** Michael Ross, Linda Lanyon, Jaya Viswanathan, Dara Manoach , JJS Barton

63.433 **Expectations alter the neural correlates of visual awareness in visual cortex** Katharina Schmack, Ana Gomez, Marcus Rothkirch, John-Dylan Haynes, Philipp Sterzer

63.434 **Reward probability and magnitude in saccadic decisions under risk: measuring bias and sensitivity to expected value.** Madeleine Sharp, Jayalakshmi Viswanathan, Linda Lanyon, Jason Barton

63.435 **Reward-based Influences on Attentional Orienting in Patients with Visuo-spatial Neglect** Leslie Drummond, Sarah Shomstein

Binocular vision: Stereopsis

Poster Session, Orchid Ballroom

Wednesday, May 11, 8:15 am - 12:15 pm

63.436 **Decoding disparity-defined surface curvature in the human brain** Aidan P Murphy, Hiroshi Ban, Andrew E Welchman

63.437 **The perception of 3D shape from binocular views of specular objects** Alexander A. Muryy, Christa M. van Mierlo , Roland W. Fleming, Andrew E. Welchman

63.438 **Asymmetric transfer of perceptual learning between coarse and fine depth discriminations** Dorita H F Chang, Zoe Kourtzi, Andrew E Welchman

63.439 **fMRI responses in higher dorsal areas relate to depth discrimination for both coarse and fine disparity tasks** Matthew L Patten, Andrew E Welchman

63.440 **Cortical areas involved in processing planar stereo motion** Son-Hee Lyu, Zhong-Lin Lu, George Sperling

63.441 **Decoding da Vinci : quantitative depth from monocular occlusions** Inna Tsirlin, Robert Allison, Laurie Wilcox

63.442 **On the quantitative nature of depth percepts from fused and diplopic stimuli** Debi Stransky, Laurie M. Wilcox

63.443 **Stereoscopic adaptation to relative perceived slant** Barbara Gillam, Phillip Marlow

63.444 **Non-transitive Depth in Stereo Displays** Bart Farell, Julian Fernandez

63.445 **Illusory "Neon" Spreading of Perceived Depth Implies an Anisotropic Propagation Constraint in Depth Reconstruction** Xintong Li, Abigail E. Huang, Eric L. Altschuler, Christopher W. Tyler

63.446 **Stereo improves 3D shape discrimination even when rich monocular shape cues are available** Young Lim Lee, Jeff Saunders

63.447 **Solving the correspondence problem between two views using a priori constraints** Tadamasa Sawada, Yunfeng Li, Zygmunt Pizlo

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Development: Lifespan and aging

Poster Session, Orchid Ballroom

Wednesday, May 11, 8:15 am - 12:15 pm

63.448 **Effects of Normal Aging on Suprathreshold Contrast Perception** Lynnette Leone, Barbara Blakeslee, Mark McCourt

63.449 **Increased spatial surround suppression in the elderly** Renee Karas, Allison McKendrick

63.450 **The effects of aging on low and intermediate stages of form processing** Allison McKendrick, Anne Weymouth

63.451 **Aging and Stereoscopic Shape Discrimination** J. Farley Norman, Jessica Holmin, Amanda Beers, Adam Frost

63.452 **The correspondence problem in apparent motion perception and aging** Eugenie Roudaia, Karin S. Pilz, Allison B. Sekuler, Patrick J. Bennett

63.453 **The effect of aging on directional tuning when making judgments about horizontal and vertical motion** Lia E. Tsotsos, Allison B. Sekuler, Patrick J. Bennett

63.454 **Effects of development on low-level feature processing during natural viewing of dynamic scenes** Po-He Tseng, Ian Cameron, Douglas Munoz, Laurent Itti

63.455 **Age-related decline in reading abilities revealed by a positional character noise paradigm** Senay V Aydin, Velitchko Manahilov, Nadia Northway, Uma Shahani, Niall C Strang, Andrew Logan

63.456 **Age related differences in the spatial extent of attention in 3D space** Russell Pierce, Zheng Bian, George Andersen

63.457 **Changes in perceptual-motor learning across the lifespan: 20, 60, 70, and 80 year olds** Rachel Coats, Winona Snapp-Childs, Andrew D. Wilson, Geoffrey P. Bingham

63.458 **Don't look here! The relationship between eye movement artifacts, covert attention, and visual working memory in older adults** Kristin E. Wilson, Stephen M. Emrich, Megumi Noda, Vince Brienza, Susanne Ferber

Topic Index

Below is a list of talk and poster sessions by topic. Parentheses indicate the abstracts that are included in each session.

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Author Index

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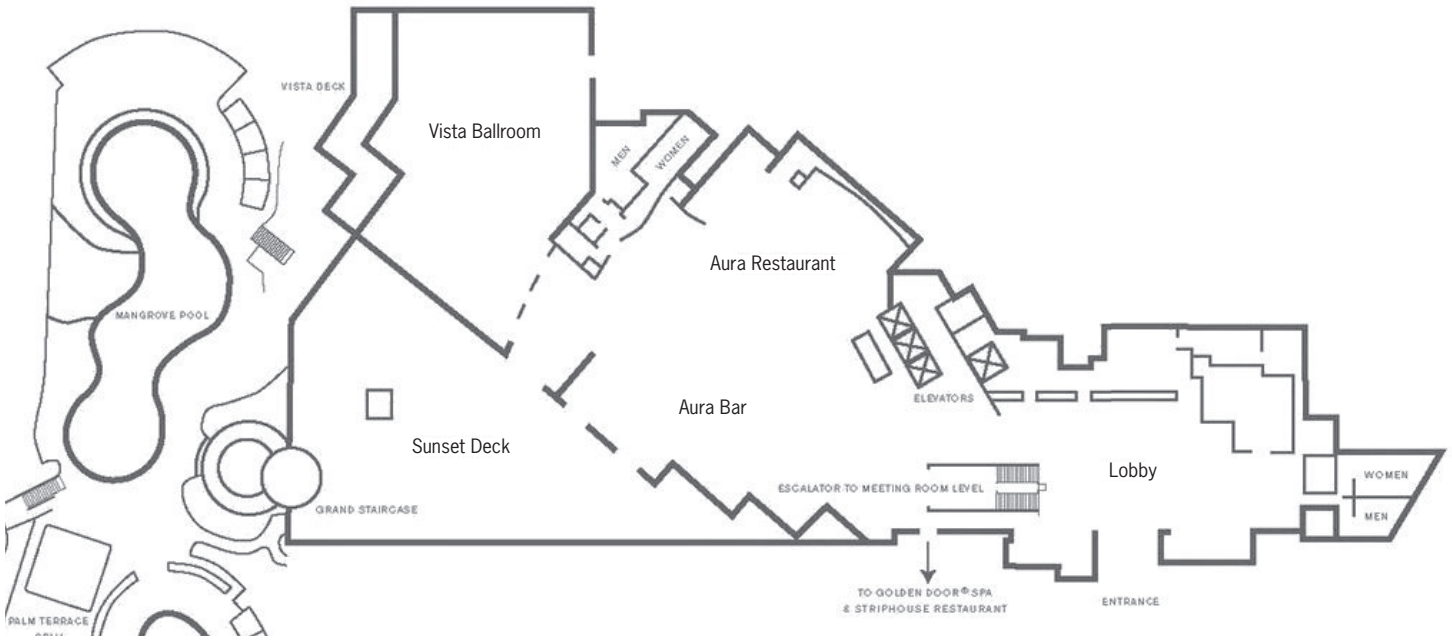
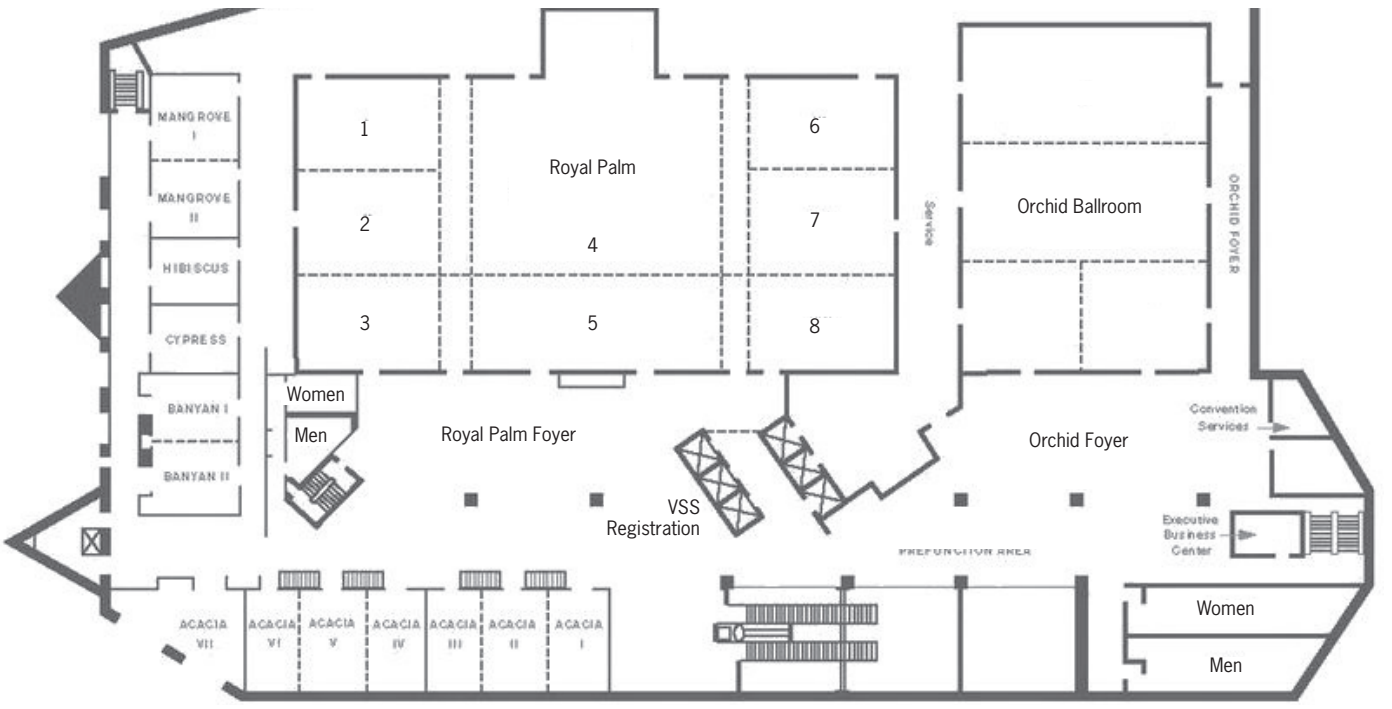
Hotel Floorplan

Lobby Level (1st Floor)



Ballroom Level (2nd Floor)



Notes