20th Annual Conference
Object Perception, Attention, & Memory

November 15, 2012
Minneapolis, MN

www.opam.net

OPAM 2012 Organizers

Carly Leonard
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Congratulations to OPAM on 20 Years

Best Wishes from the CNBC Vision Community:

Marlene Behrmann - Visual Cognition
Marlene Cohen - Population Coding
Carol Colby - Perceptual Stability
Aloysha Efros - Data-driven Scene Understanding
Martial Hebert - Recognition & Scene Understanding
Roberta Klatzky - Perception and Action
Sandra Kuhlman - Sensory Development
Tai Sing Lee - Mid-level Vision
Carl Olson - High-level Vision
David Plaut - Neural-Network Modeling
Matt Smith - Functional Circuits of Vision
Michael Tarr - Visual Cognition
Wayne Wu - Attention & Consciousness

Participating Programs:

Neural Computation @ CNBC
Biological Sciences @ CMU
Center for Neuroscience @ Pitt
Computer Science @ CMU
Machine Learning @ CMU
Psychology @ CMU & Pitt
Robotics @ CMU
Statistics @ CMU

Carnegie Mellon University

OPAM 2012 Talk Session
Minneapolis Hilton, Salon G

7:30	Registration/Breakfast	
8:15	Opening Remarks	
Lead: Melissa Võ		**Ecological perception**
8:30	Cronin & Brockmole	Reference Frames, Implied Motion, Animacy, and Gaze-Control
8:45	Meyerhoff, Huff, & Schwan	Linking perceptual animacy to visual attention: Evidence from chasing detection
9:00	Young & Cordes	Fewer things, lasting longer: The effects of emotion on quantity judgments
9:15	Caparos, Linnell, Bremner, De Fockert, & Davidoff	Does local/global perceptual bias tell us anything about local/global selective attention?
9:30	Break	
Lead: Carly Leonard		**Working memory**
9:45	Cunningham & Wolfe	Lions or tigers or bears: Oh my! Hybrid visual search for categorical targets
10:00	Rajsic & Wilson	Remembering where: Estimated memory for visual objects is better when retrieving location with colour
10:15	Bigelow & Poremba	Comparing short-term memory among sensory modalities
10:30	Break	
Lead: Josh Cosman		**Attention and decision making**
10:45	Vatterott & Vecera	The attentional window configures to object boundaries
11:00	Adamo, Cain, & Mitroff	Self-induced attentional blink: a cause of errors in multiple-target visual search
11:15	Moher & Song	Dynamic threshold adjustments reduce costly changes-of mind in perceptual-decision making
11:30	Sali, Anderson, & Yantis	Reinforcement learning modulates states of cognitive flexibility
11:45	Lunch (Posters should be up)	
12:30-2:15	**Poster Session**	**Minneapolis Convention Center, Ballroom A**
2:15	Break (Posters down by 2:30)	
Lead: Michael Mack		**Object perception and recognition**
2:30	Baruch, Kimchi, & Goldsmith	Object recognition: attention to distinguishing features
2:45	Firestone & Scholl	“Please tap the shape, anywhere you like”: An exceedingly simple measure exposes skeletal shape representations
3:00	Greene & Fei-Fei	Automatic basic-level object and scene categorization
3:15	Break	
3:30	**KEYNOTE ADRESS**	**Dr. Michael Tarr**
4:30	Awards and Closing Remarks	

OPAM 2012 Keynote Address

Salon G
Minneapolis Hilton
3:30 p.m.

Dr. Michael Tarr
Center for the Neural Basis of Cognition, Carnegie Mellon University

Twenty years in twenty slides
A brief history of vision

Sponsored by

CAMBRIDGE RESEARCH SYSTEMS

OPAM 2012 Poster Session
Minneapolis Convention Center, Ballroom A

Object processing

1. Object-object based contextual effects on object recognition
   Marcus Chen & David Andresen
2. The role of surface feature continuity in binding objects and semantic information
   Caglar Tas & Andrew Hollingworth
3. Object detection, categorization, and visual salience: You know what it is before you know something is there
   Mark Thomas & Carrick Williams
4. Contribution of semantic information to object-based attentional selection
   George Malcolm & Sarah Shomstein
5. Object-based benefits without object-based representations
   Daryl Fougnie, Sarah Cormiea, & George Alvarez
6. Visual indexes facilitate attentional processing
   Annie Tran & James Hoffman

Perceptual processing

7. Similar time course of subjective, objective and indirect measures of perception
   Ziv Peremen & Dominique Lamy
8. Hitting a miss: Limitations of signal detection theory
   Jeremy Schwark, Igor Dolgov, Joshua Sandry, & Justin MacDonald
9. The effects of stimulus density and size on symmetry detection
   Szu-Yu Chen & Hsuan-Fu Chao
10. Antipriming accompanies priming in spoken word recognition
    Katie Broadwell, Anna Schnurrer, Eric Partridge, Katrina Achamabault, Benjamin Munson, & Chad Marsolek
11. Emergent features help resolve ambiguous apparent motion
    Anna Cragin, Belicia Ding, & James Pomerantz

Face processing

12. Categorical perception of discriminating Caucasian faces along the morphed continuum of happy and fearful expressions: An ERP study
    Ming-Chuen Lee, Shih-Tseng Tina Huang, & Gary C.-W. Shyi
13. Evidence for expertise in facial symmetry assessment
    Kait Clark, Tate Jackson, & Stephen Mitroff

14. Individuals with autism spectrum disorder use configural information more than neurotypical individuals when recognizing faces
Noah Schwartz, Geneva Polser, Sarah Adams, Cory Katona, Alie Plott, Paige Daniels, Ayla Byrd, & Miranda Wood
15. Coordinate coding explains face inversion effects better than holistic processing
Jonathan Kahl, Larissa Arnold, & Eric Cooper
16. Holistic processing in matching simultaneously presented composite faces: Evidence from the Complete design
George Chao-Chih Wang & Gary C.-W. Shyi
17. Parts and wholes both contribute to visual crowding of faces
Hsin-Mei Sun & Benjamin Balas
18. People have no tendency to categorize other-race faces
Zhijie Cheng & Guomei Zhou
19. Own-race bias and eye movements: Does effort predict memory?
Anne Robinson, Carrick Williams, & Tracie Stewart
20. Perceptual processes in the cross-race effect: Evidence from eyetracking
Gerald P. McDonnell, Cindy Laub, Brian Bornstein, & Michael Dodd

Spatial processing

21. Change detection is increased by disruptions of spatial continuity
Lewis Baker & Daniel Levin
22. Reference points in spatial memory
Whitney Street & Ranxiao Frances Wang
23. Effects of spatial configurations on the resolution of spatial representations
Aysu Mutluturk & Aysecan Boduroglu
24. Not all spatial tasks illustrate dual task interfere with saccadic eye movements
Eric Blumberg, Surpreet Sachdeva, & Matthew Peterson

Visual search

25. Why is visual search so difficult when target features are instantaneous?
Nicole Jardine & Cathleen Moore
26. Small perceptual differences cause big problems when they make your “target template” imprecise
Michael Hout & Stephen Goldinder
27. Pattern-breaking pop out: Further evidence in support of the Theory of Basic Gestalts
Kimberly Orsten, Amanda Hahn, & James Pomerantz
28. Voices facilitate visual search for congruent faces
L. Jacob Zweig, Marcia Grabowecky, & Satoru Suzuki

Ecological perception and attention

29. ERP evidence for an early locus of perceptual disruption by emotional stimuli
    Briana Kennedy, Jennifer Rawding, Steven Most, & James Hoffman
30. Vision for stimuli on the hands: Introducing the body boundary hypothesis
    Eric Taylor & Jessica Witt
31. Different rotation functions for identifying objects, animals, and faces
    Larissa Arnold, Jonathan Kahl, & Eric Cooper
32. Availability of physical support decreases perceived step height in older adults
    Mila Sugovic & Jessica Witt
33. The invisible gorilla strikes again: Sustained inattentional blindness in expert observers
    Trafton Drew, Melissa Le-Hoa Võ, & Jeremy Wolfe
34. Second search same as the first: The benefits of consistency in multiple target search for professional and non-professional visual searchers
    Adam Biggs, Stephen Mitroff
35. The relationship between aesthetic choice, values and looking time during a visual aesthetic decision task
    Eve Isham, Rachel Gwinn, & Joy Geng

Selective attention

36. Exact temporal locus of visual distraction
    Ricardo Max & Yehoshua Tsal
37. Electrophysiological evidence for automatic word recognition in a Stroop Task
    Jae Hyung Han, Han Shin Kim, & Yang Seok Cho
38. Awareness of one's own name under high attentional load
    Szu-Hung Lin & Yei-Yu Yeh
39. Perceptual load and perceptual grouping modulate the attentional allocation to peripheral distractor: an event-related potentials study
    Shao-Ming Lee & Yei-Yu Yeh

Capture and cognitive control

40. The content in visual working memory automatically captures visual attention
    Sunghyun Kim, Han Shin Kim, & Yang Seok Cho
41. Different tags in working memory influence working memory-driven attentional capture
    Chun-Yu Kuo, Hsuan-Fu Chao, & Yei-Yu Yeh
42. Impaired proactive cognitive control in action video game players
    Kara Blacker & Kim Curby
43. Multiple attentional control settings established on a trial-by-trial basis
    Zachary Roper & Shaun Vecera

44. Effect of target-distractor similarity on top-down attention effect in visual search with salient distractor
Kao Yamaoka & Chikashi Michimata

45. Task-switching delayed responses with natural images in RSVP
Stephane Buffat, Charles-antoine Salasc, Justin Platier, & Jean Lorenceau

Visual memory

46. The duration for top-down control to enhance color-shape bound representations
Kuan-Yao Huang & Yei-Yu Yeh

47. Assessment of object processing in visual short-term memories
Melissa Trevino, Bruno Breitmeyer, & Jane Jacob

48. Within-category visual similarity differentially predicts working memory for abstract categories and specific exemplars of unfamiliar objects
Brianna Morseth, E. Darcy Burgund, & Chad Marsolek

49. The reliance on ensemble statistics in visual working memory varies according to the availability of item memory
Seongmin Hwang & Andrew Hollingworth

50. Resource sharing between iconic and post-iconic processing
Jane Jacob, Shon MonDragon, & Bruno Breitmeyer

51. Autistic personality traits and visual memory resolution
Lauren Richmond, Elizabeth Klobusicky, & Ingrid Olson

Remembering and forgetting

52. Memory for size vs. memory for relative size
Pamela Glosson & John Hummel

53. Smothered by the scene: When context interferes with memory for objects
Karla Evans & Jeremy Wolfe

54. I guess you had to be there: Episodic as well as semantic information organizes visual memory
Karla Antonelli & Carrick Williams

55. The effect of interpolated testing on directed forgetting
Jessica LaPaglia & Jason Chan

56. Boundary extension in children vs. adults: What developmental differences may tell us about scene representation
Erica Kreindel & Helene Intraub

57. A new “twist” on boundary extension: We falsely remember more surrounding space when the world is upside-down
Steve Beighley & Helene Intraub

58. Reconsolidation in human episodic memory
Keely Burke, Jessica LaPaglia, & Jason Chan

Maps and Floorplans

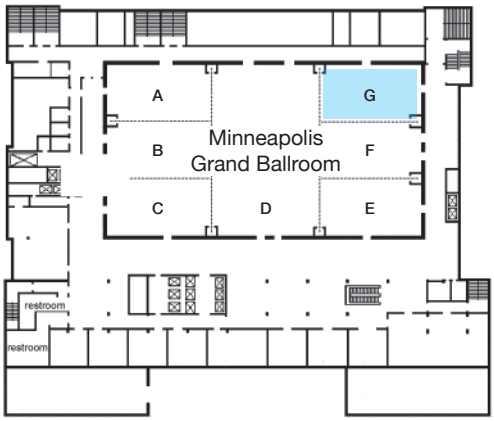
OPAM Talks

Hilton Minneapolis

Third Floor

Salon G

Hilton Minneapolis - Third Floor



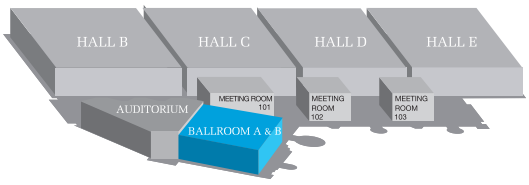
OPAM Posters

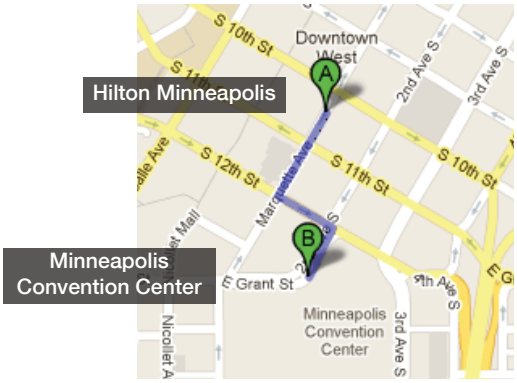
Minneapolis
Convention Center

Level One

Ballroom A

Minneapolis Convention Center
Level One





Notes

Tools for Functional Imaging

CAMBRIDGE RESEARCH SYSTEMS

MRI compatible LCD displays

MRI compatible eye tracking

fNiRS imaging

MRI compatible response boxes

MRI compatible audio

www.crsltd.com

For more information contact Cambridge Research Systems:

Tel: +44 1634 720 707

USA: 1-866-846-2929

Email: enquiries@crsltd.com

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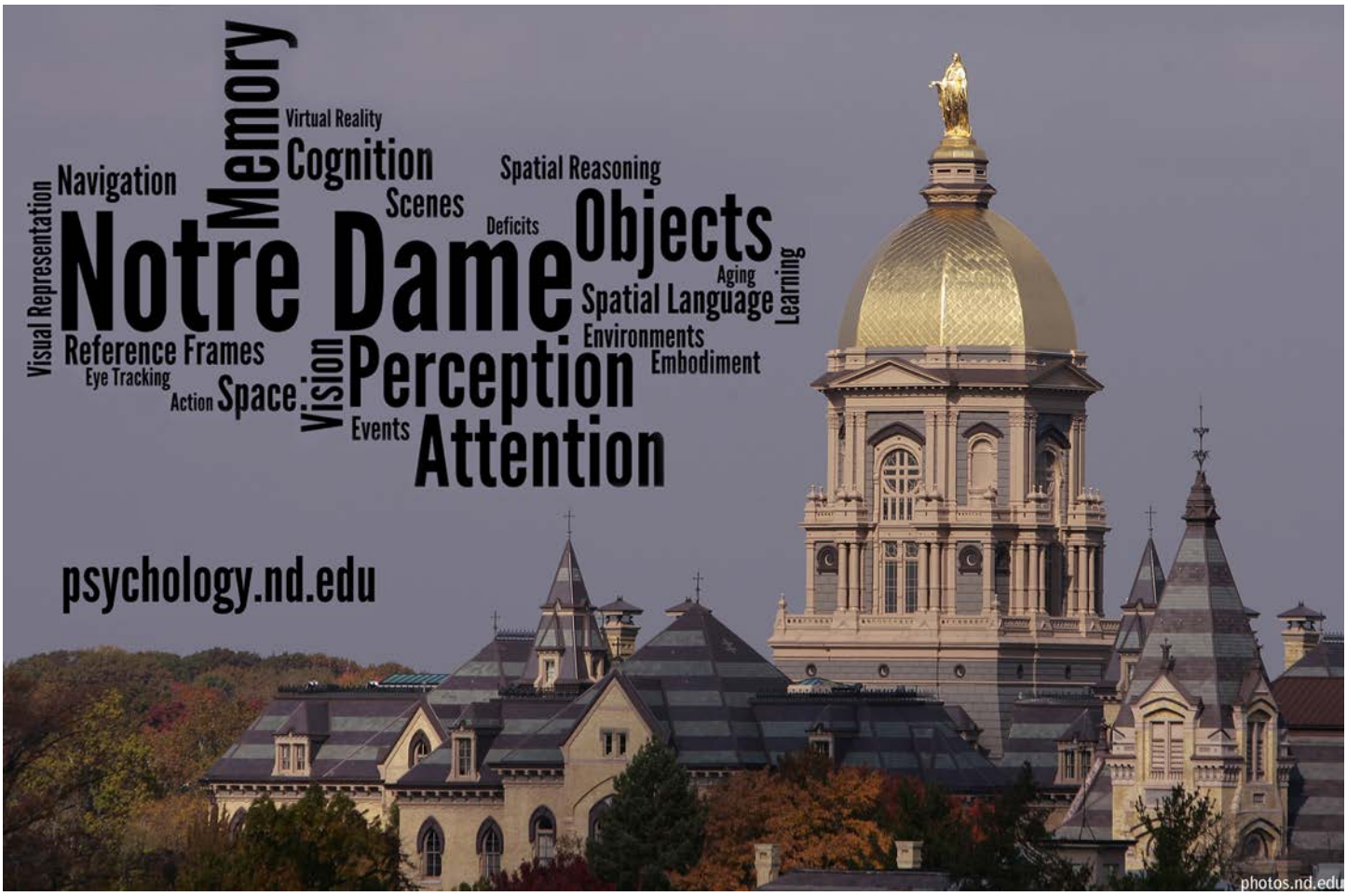
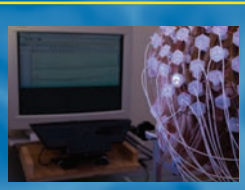
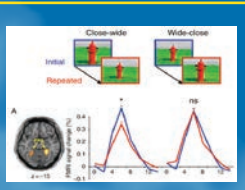


UNIVERSITY OF DELAWARE

The Cognitive Program in the Department of Psychology at the University of Delaware provides research training in several core areas of cognition, particularly spatial cognition. A variety of cognitive neuroscience approaches are represented including cognitive neuropsychology, ERP, TMS, fMRI, and eye movement recording.

Faculty:

James E. Hoffman • Visual attention, attention and eye movements, ERP, emotion and attention

Helene Intraub • Scene perception and memory, spatial representation (vision and touch), view integration and eye movements

Jared Medina • Body representations, spatial representations, neglect, TMS, cognitive neuropsychology

Anna Papafragou • Language acquisition and processing, spatial representation, cross-linguistic differences in spatial processing

Paul C. Quinn • Perceptual organization, categorization, spatial representation, face processing, and their emergence during infancy

Timothy Vickery • Cognitive neuroscience of visual attention, perception, learning, decision-making and reward using fMRI and behavioral methods

For more information please visit out website: www.psych.udel.edu

ViewPoint EyeTracker ®

Scene Systems

Light weight and comfortable the eye tracking system can be worn without discomfort for long periods. View real-time gaze or recorded AVI 2.0 movies with gaze point shown clearly over the scene video. Easily adjustable in size and compatable with glasses.

* **Compatable with glasses**
* **Binocular version includes correction for parallax error**
* **The lightest weight at less than 25g**
* **No head tracker is required**
* **No beam splitter**
* **Fits any face**

Wireless !

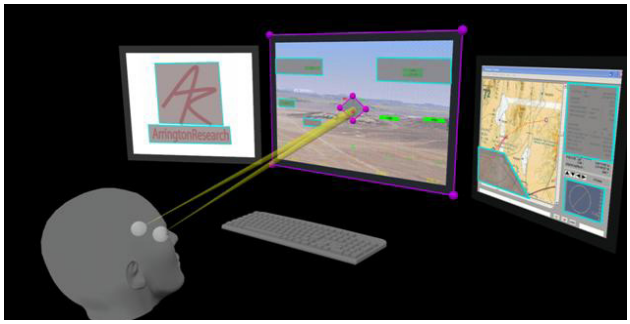
Binocular SceneCamera

Real-time digital wireless data with Eye & Scene Video

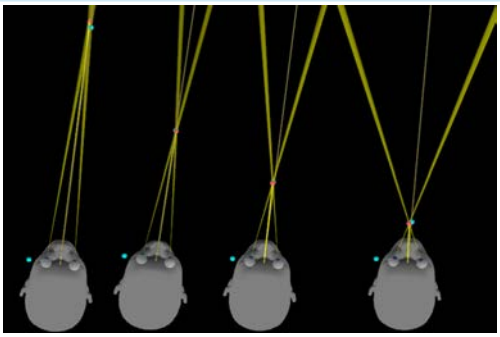
Problems Solved -

Parallax errors and frame torsion errors are real problems with monocular systems. *ViewPoint* binocular systems eliminate these problems providing accuracy over the entire range of distance.

3DWorkSpace™



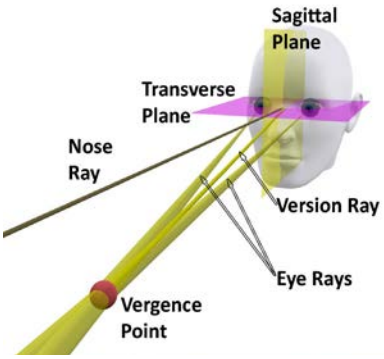
New *3DWorkSpace*™ and *3DViewPoint*™ provide precise 3D depth information for 3D monitors, gaze across multiple monitors and curved displays.



400 Hz USB

HeadLock™ & Remote

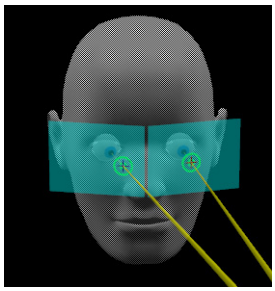
3DViewPoint™



* **Vergence & Version Angles**
* **3D Scan Paths**
* **Fast & Easy Setup**
* **Intuitive 3D Graphics**
* **Post-hoc ROI Specifications**
* **Torsion across 3D Gaze**
* **Heat, Fog and Torch Maps**
* **Polygon/Concave ROI**
* **Angular Calculations**
* **Quanternion Transforms**

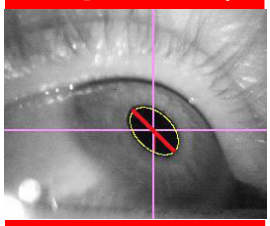
HMD Systems

Leading integrator of HMD eye tracking systems. We can design for any HMD.

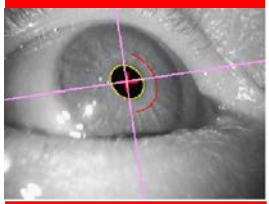


* **Canted / Tilted Displays**
* **Full or Partial Binocular Overlap**
* **See-thru or Opaque Displays**

Pupilometry



Torsion



Interfaces

ArringtonResearch

www.ArringtonResearch.com 1.480-985-5810

Why Use Several Different Eye Trackers
When You Can Have Several in One?

EyeLink 1000

EyeLink 1000 is an easy to use eye tracking system that can be set up in several different configurations, including 2000 Hz head supported, 500 Hz Remote (Head Free), and now 1000 Hz for MEG / MRI use.

Key Specifications

	Head Supported	Remote (Head Free)
Sampling Rate	2000 Hz Monocular 1000 Hz Binocular	500 Hz Monocular
Average Accuracy	down to 0.15º (0.25º - 0.5º typical)	down to 0.25º (0.5º typical)
Resolution	0.01º RMS micro-saccade resolution of 0.05º	0.05º RMS saccade resolution of 0.25º
Participant Setup	Very simple and easy: Typically 2-5 minutes.	

Camera Upgrades

The custom designed high speed EyeLink 1000 camera can be upgraded in three different ways, further extending the systems high end specifications and usage options.

Remote (Head Free)

Remote (Head Free)
Allows the EyeLink 1000 system with Desktop or LCD Arm mounts to be used.

2000 Hz

Provides a 2000 Hz monocular sampling rate and a 1000 Hz binocular sampling rate when used with mounting options that support binocular tracking. Provides the best real-time sample access delays.

Fiber Optic

Upgrades the standard EyeLink 1000 camera to the miniature Fiber Optic camera head. Ideal for MEG, MRI, and EEG applications.

Mounting Options

The EyeLink 1000 consists of a core base system that can be used with five different mounting options, providing the ultimate in system extensionality.

Desktop

Our most popular mount: easy to transport, no electronics near the participant's head. Supports high speed head supported and remote (head free) recording modes. Binocular or monocular tracking.

Tower

Provides an increased eye tracking range compared to the other mounts. Also useful when participant is using a touch screen. Monocular eye tracking.

LCD Arm

A modified Desktop mount affixed to a 17" LCD monitor and flexible LCD arm.

Long Range

For MEG and MRI use. Supports distances between 60 and 150 cm.

Primate

Useful in non-human primate research environments where hardware is mounted to primate chair.

SR Research also provides the most flexible, graphically based, Experiment Building software; completely integrated with the EyeLink 1000 eye tracking platform.

SR Research
EyeLink®

SR Research
Complete Eye Tracking Solutions
www.sr-research.com