Curriculum Vitae

Michael A. Paradiso

Department of Neuroscience

EDUCATION

1978	Pomona College, B.A. Physics
1984	Brown University, Ph.D. Physics with Leon Cooper
1984-1987	UC Berkeley, postdoctoral training in neurophysiology with Ralph Freeman
1987-1990	Smith-Kettlewell Eye Research Institute, postdoctoral training in visual psychophysics with Ken Nakayama

PROFESSIONAL APPOINTMENTS

1978-1979	Research Engineer, Remote Measurements Lab, Stanford Research Institute
1984-1987	Miller Research Fellow, Neurobiology Group, University of California, Berkeley, CA
1987-1989	Research Fellow, Smith-Kettlewell Eye Research Institute, San Francisco, CA
1989-1990	Associate Scientist, Smith-Kettlewell Eye Research Institute, San Francisco, CA
1990-1992	Assistant Professor, Center for Neural Science, Brown University, Providence, RI
1992-1995	Assistant Professor, Department of Neuroscience, Brown University, Providence, RI
1995-2002	Associate Professor, Department of Neuroscience, Brown University, Providence, RI
2002-2003	Acting Chairman, Department of Neuroscience, Brown University, Providence, RI
2003-	Professor, Department of Neuroscience, Brown University, Providence, RI
2005	Acting Chairman, Department of Neuroscience, Brown University, Providence, RI
2004-2005	Vice-chairman, Department of Neuroscience, Brown University, Providence, RI
2008-2015	Vice-chairman, Department of Neuroscience, Brown University, Providence, RI
2006 -	Sidney A. Fox and Dorothea Doctors Fox Professor of Ophthalmology and Visual Science, Brown University
2007 -	Founding Director, Brown University Center for Vision Research
2011	Acting Chairman, Department of Neuroscience, Brown University, Providence, RI

FELLOWSHIPS AND HONORS

1984-1986	Miller Research Fellowship, University of California, Berkeley
1987-1989	Rachel C. Atkinson Fellowship for Eye Research
2002	Chair of the National Academy of Sciences Fifth Annual Japanese-American Frontiers of Science Symposium
2006-2008	Elizabeth H. LeDuc Award for Teaching Excellence in the Life Sciences
2006-	Sidney A. and Dorothea Doctors Fox Professor of Ophthalmology and Visual Sciences
2007	Undergraduate Council of Students Award for Excellence in Teaching
2014	Harriet W. Sheridan Award for Distinguished Contribution to Teaching and Learning

EDITORIAL AND REVIEW BOARDS

2002 – 2007	Vision Sciences Society Executive Committee
2004 -	Vision Research, Editorial Board
2006 -	Journal of Vision, Editorial Board

2005 – 2007 NIH Central Visual Processing Study Section, ad hoc reviewer
2007 NIH Study Section for Career and Training Awards
2007 - 2009 NIH/NEI Central Visual Processing study section, regular member
2010 NIH T32 Study Section
2009 - 2011 NIH/NEI Central Visual Processing study section, Chairman
2013 NSF ad hoc grant review

PUBLICATIONS

Events

Center for Vision Research 5th Anniversary, Organizer (poster session, art show, talks), October 2012.
Everett Theater Residency at Brown's Granoff Center, Organizer and Speaker, October 2012.

Books

Bear MF, Connors B, Paradiso MA (1996) Neuroscience: Exploring the Brain. Williams and Wilkins, New York, NY.
Bear MF, Connors B, Paradiso MA (2001) Neuroscience: Exploring the Brain (Second Edition). Williams and Wilkins, New York, NY.
Bear MF, Connors B, Paradiso MA (2006) Neuroscience: Exploring the Brain (Third Edition). Williams and Wilkins, New York, NY.
Bear MF, Connors B, Paradiso MA (2015) Neuroscience: Exploring the Brain (Fourth Edition). Williams and Wilkins, New York, NY.
(Foreign editions: Chinese, French, German, Italian, Japanese, Portuguese, Spanish)

Radio

National Public Radio program "All Things Considered", August, 1996.

Chapters in books

Intrator N, Bear MF, Cooper LN, Paradiso MA (1994) Theory of synaptic plasticity in visual cortex. In: Synaptic Plasticity: Molecular, cellular and functional aspects (R Thompson, M Baudry, J Davis eds.). MIT Press, Cambridge, MA.
Rossi AF, Paradiso MA (2003) Surface completion: Psychophysical and neurophysiological studies of brightness interpolation In: "Filling-in: from perceptual completion to skill learning", eds: Pessoa L. and De Weerd P., Oxford University Press.

Refereed journal articles

Bear MF, Paradiso MA, Schwartz M, Nelson SB, Carnes KM, Daniels JD (1983) Two methods of catecholamine depletion in kitten visual cortex yield different effects on plasticity. Nature 302: 245-247.
Paradiso MA, Bear MF, Daniels JD (1983) Effects of intracortical infusion of 6-hydroxydopamine on the response of kitten visual cortex to monocular deprivation. Experimental Brain Research 51: 413-422.

Ramoa AS, Paradiso MA, Freeman RD (1988) Blockade of intracortical inhibition in kitten striate cortex: effects on receptive field properties and associated loss of ocular dominance plasticity. Experimental Brain Research 73: 285-296.

Paradiso MA, Carney T (1988) Orientation discrimination as a function of stimulus eccentricity and size: nasal/temporal retinal asymmetry. Vision Research 28: 867-874.

Paradiso MA (1988) A theory for the use of visual orientation information which exploits the columnar structure of striate cortex. Biological Cybernetics 58: 35-49.

Carney T, Paradiso MA, Freeman RD (1989) A physiological correlate of the Pulfrich effect in cortical neurons of the cat. Vision Research 29: 155-165.

Paradiso MA, Carney T, Freeman RD (1989) Cortical processing of hyperacuity tasks. Vision Research 29: 247-254.

Paradiso MA, Shimojo S, Nakayama K (1989) Subjective contours, tilt after effects, and visual cortical organization. Vision Research 29: 1205-1213.

Anstis S, Paradiso M (1989) Programs for visual psychophysics on the Amiga: A tutorial. Behavior Research Methods, Instruments, and Computers 21: 548-563.

Paradiso MA, Nakayama K (1991) Brightness perception and filling-in. Vision Research 31:1221-1236.

Intrator N, Bear MF, Cooper LN, Paradiso MA (1994) Theory of synaptic plasticity in visual cortex. In: Synaptic Plasticity: Molecular, cellular and functional aspects (R Thompson, M Baudry, J Davis eds.). MIT Press, Cambridge, MA.

Rossi AF, Paradiso MA (1995) Feature-specific effects of selective visual attention. Vision Research 35: 621-634.

Rossi AF and Paradiso MA (1996). Temporal limits of brightness induction and mechanisms of brightness perception. Vision Research 36: 1391-1398.

Paradiso MA and Hahn S (1996). Filling-in percepts produced by luminance modulation. Vision Research 36: 2657-2663.

Rossi AF, Rittenhouse CD, and Paradiso MA (1996). The representation of brightness in primary visual cortex. Science 273: 1104-1107.

Macevoy S, Kim W, and Paradiso MA (1998) Integration of surface information in primary visual cortex. Nature Neuroscience 1: 616-620.

Rittenhouse CD. Shouval HZ, Paradiso MA, and Bear MF (1999) Monocular deprivation induces homosynaptic long-term depression in visual cortex. Nature 397: 347-350.

Paradiso MA (1999) Monkey business builds a bridge to the human brain. Nature Neuroscience 2: 491-492. [Invited commentary]

Rossi AF and Paradiso MA (1999) Neural correlates of brightness in the responses of neurons in the retina, LGN, and primary visual cortex. Journal of Neuroscience 19: 6145-6156.

Paradiso MA (2000) Visual Neuroscience: Illuminating the dark corners. Current Biology 10: R15-18.

Macevoy SP, Paradiso MA (2001) Lightness constancy in primary visual cortex. Proceedings of the National Academy of Science 98: 8827-8831.

Shimojo S, Paradiso MA, Fujita I (2001) What visual perception tells us about mind and brain. Proceedings of the National Academy of Sciences 98: 12340-12341.

Paradiso MA (2002) Neuronal and perceptual correspondence in primary visual cortex. Current Opinion in Neurobiology 12: 155-161.

Huang X, Macevoy SP, Paradiso MA (2002) Brightness perception and brightness illusions in the macaque monkey. Journal of Neuroscience 22: 9618-9625.

Rossi AF, Paradiso MA (2003) Surface completion: Psychophysical and neurophysiological studies of brightness interpolation In: “Filling-in: from perceptual completion to skill learning”, eds: Pessoa L. and De Weerd P., Oxford University Press.

Paradiso MA, MacEvoy SP, Huang X, Blau S (2005) The importance of modulatory input for V1 activity and perception. Progress in Brain Research 149: 257-266.

Huang X, Paradiso MA (2005) Background changes delay information represented in macaque V1 neurons. Journal of Neurophysiology 94: 4314 - 4330.

Huang X, Blau S, Paradiso MA (2005) Background changes delay the perceptual availability of form information. Journal of Neurophysiology 94: 4331 - 4343.

Rittenhouse CD, Siegler BA, Voelker CA, Shouval HZ, Paradiso MA, Bear MF (2006) Stimulus for rapid ccular dominance plasticity in visual cortex. Journal of Neurophysiology 95: 2947-2950.

Paradiso MA, Blau S, Huang X, MacEvoy SP, Rossi AF, Shalev G (2006) Lightness, filling-in, and the fundamental role of context in visual perception. Progress in Brain Research 155: 109-123.

Macevoy SP, Hanks TD, Paradiso MA (2008) Macaque V1 activity during natural vision: effects of natural scenes and saccades. Journal of Neurophysiology 99: 460–472.

Huang X, Paradiso MA (2008) V1 response timing and surface filling-in. Journal of Neurophysiology 100: 539-547.

Huang X, Levine S, Paradiso MA (2008) Rebounding V1 activity and a new visual aftereffect. Journal of Vision 8: 1-10.

Ruiz O, Paradiso MA (2012) Macaque V1 representations in natural and reduced contexts: spatial and temporal properties and the influence of saccadic eye movements. Journal of Neurophysiology 108: 324-333.

Paradiso MA, Meshi D, Pisarck J, Levine S (2012) Saccadic eye movements reset visual perception. Journal of Vision 12: 1-14.

Lii T, Ruiz O, Paradiso MA (in review) Human contrast sensitivity in natural vision.

Ruiz O, Loper J, Resvick J, Stephen E, Geman S, Paradiso MA (in preparation) Neural activity in macaque V1 accurately predicts the timing of fixations and saccades.

Niemeyer J, Paradiso MA (under reivew) Contrast sensitivity and V1 neural responses in natural vision.

Invited lectures

Barrow Neurological Institute, Phoenix, “The importance of saccadic eye movements for visual processing and perception”, 2013.

Baylor College of Medicine, Division of Neuroscience, "Brightness perception and filling-in", 1991

Biological Society of Chile, 40th Annual Meeting, “Modulation of neural responses in striate cortex by stimuli outside the receptive field: characterization and relationship to the perception of surface lightness”, Pucon, Chile, November, 1997.

Boston University, Department of Psychology, “The critical role of eye movements in visual coding and perception”, 2010.

Boston University, Department of Cognitive and Neural Systems, "Brightness perception and filling-in", 1992

Boston University, Department of Biomedical Engineering, "Spatial interactions in the perception of brightness", 1992.

Boston University, Department of Cognitive and Neural Systems, " Cortical representation of surface information: influences from beyond the classical receptive field ", 1996.

Boston University, Department of Cognitive and Neural Systems, “Cell signals for surface perception”, December 3, 1999.

Brown University, Department of Cognitive and Linguistic Sciences, "Brightness perception and filling-in", 1993

Brown University, Department of Cognitive and Linguistic Sciences, "Perceptual integration and neuronal interactions in visual cortex", 1998.

Brown University, Department of Neuroscience, "Mechanisms of surface perception", 1995
Brown University, Commencement Forum, “Vision and brain: is the world a hallucination?”, 2007.
Brown University, Sheridan Center 20th Anniversary, “Lessons about learning from neuroscience”, 2007.
Brown University, Neuroscience Graduate Program, Graduate Student Recruiting, February 2008.
Brown University, A Day on College Hill, “Vision and brain: is the world a hallucination?”, April 2008.
Brown University, A Day on College Hill, “Vision and brain: is the world a hallucination?”, April 2009.
Brown University, A Day on College Hill, “Neuroscience in the Age of the Matrix”, April 2010.
Brown University, A Day on College Hill, “Vision and brain: is the world a hallucination?”, April 2011.
Brown University, A Day on College Hill, “Vision and brain: is the world a hallucination?”, April 2012.
Brown University, A Day on College Hill, “Vision and the brain”, April 2013.
Brown University, A Day on College Hill, “The Magical Brain: From Neurons to Consciousness”, April 2015.
Brown University, Family Weekend, “In the Eye of the Beholder: How the Brain Synthesizes the World We Perceive”, October 2011.
Brown University, New Scientist Program – Catalyst program for under-represented science students, “Finding your Question”, August 2011.
Brown University, New Scientist Program – Catalyst program for under-represented science students, August 2012.
Brown University, New Scientist Program – Catalyst program for under-represented science students, “Functional Brain Imaging”, August 2013.
Brown University, Women in Science and Engineering, February 2011.
Brown University, Women in Science and Engineering, October 2013.
Brown University, Summer and Continuing Studies, June 2011.
Brown University, Summer and Continuing Studies, “Neuroscience and vision”, July 2008.
Brown University, Summer and Continuing Studies, “Neuroscience and vision”, July 2009.
Brown University, Brain Science 10th Anniversary Vision Panel, moderator, September 2010.
Brown University, 250th Celebration, classes on brain anatomy and function for Rhode Island middle school students, March 2014.
California Institute of Technology, Computation and Neural Systems, “How bright is striate cortex?”, November 22, 1999.
Cold Spring Harbor Course - “Structure, function and development of the visual system”, June 27, 2001.
Columbia University, “The fundamental role of visual and behavioral context in perception and physiology”, April 26, 2007.
Eunice Kennedy Shriver Center, “Cortical representations and computations for visual perception“, March 2, 2001.
European Conference on Visual Perception, A Coruna Spain (invited speaker). Neural computations underlying visual perception. August, 2005.
Everett Dance Theater Brainstorm Project, “Vision and the Brain”, April 2011
Federal University of Rio de Janeiro, Department of Neurobiology, “Modulation of neural responses in striate cortex by stimuli outside the receptive field: characterization and relationship to the perception of surface lightness”, 1997.
Fifteenth International Conference on Cognitive and Neural Systems, Boston, “Saccadic eye movements and their role in neural coding and perception”, April, 2011.

Fourth International Conference on Cognitive and Neural Systems, “What do neurons in visual cortex see?” Boston University, May 26, 2000.

Harvard University, Department of Psychology, "Mechanisms of brightness perception and filling-in", 1994

Harvard University, Department of Neurobiology, “Perceptual integration and neuronal interactions in visual cortex”, November 3, 1998.

Harvard University, Department of Psychology, “Vision in the natural world”, Festschrift in honor of Dr. Ken Nakayama, May, 2015.

Helmholtz Club at University of California, Irvine, “Seeing perception in visual cortex”, November 23, 1999.

Jackson, Wyoming, Brown University Development Presentation, “Vision and brain: is the world a hallucination?”, 2007.

Johns Hopkins University, Department of Psychology, “Is striate cortex brighter than we think?”, February, 1997.

Johns Hopkins University, Department of Neuroscience, “Perceptual and neuronal correspondence in primary visual cortex, March 18, 2002.

Massachussetts Institute of Technology, Teuber Symposium on Surface Perception, Dept. of Brain and Cognitive Sciences, “Is striate cortex brighter than we think?”, October, 1996.

Massachussetts Institute of Technology, Deptartment of Brain and Cognitive Sciences, “Perceptual integration and neuronal interactions in visual cortex”, March 12, 1999.

Massachussetts Institute of Technology, Deptartment of Brain and Cognitive Sciences, “Perceptual and neuronal correspondence in primary visual cortex”, November 2, 2001.

Massachussetts Institute of Technology, Scene Understanding Symposium, “The influence of complex visual context, eye movements, and attention on visual processing and perception”, January 30, 2009.

Massachussetts Institute of Technology, Scene Understanding Symposium, “Effects of exploratory saccades on brain activity and visual perception”, January 28, 2011.

Medical College of Georgia, “The fundamental role of visual and behavioral context in perception and physiology”, April 11, 2007.

National Academy of Sciences, Irvine, California, Third Annual Japanese-American Frontiers of Science Symposium, “How the brain builds the world we perceive”, September 23, 2000.

National Institute of Physiological Sciences, Okazaki, Japan, Conference on Neural Mechanisms of Visual Perception and Cognition, March 8-10, 2000.

New York University, Center for Neural Science, “Perceptual and neuronal correspondence in primary visual cortex”, February 11, 2002.

North Dakota State University, Department of Psychology, “Perceptual integration and neuronal interactions in visual cortex”, November 20, 1998.

Optical Society of America (invited speaker), “Brightness perception and neural interactions in visual cortex”, Santa Clara, CA, September, 1999.

Rhode Island School of Design, “Light and Color”, April 2012

Rockefeller University, "Brightness perception and filling-in", 1991

Sarah Doyle Center, Brown University, Vision and Brain: Is the world an hallucination?, April 2007.

Sheridan Center for Teaching and Learning, Lessons about learning from neuroscience, November 2007.

Sheridan Center for Teaching and Learning, A neuroscientist’s reflections on teaching and learning. 2014.

Smith-Kettlewell Eye Research Institute, "Brightness perception and filling-in", 1990

Smith-Kettlewell Eye Research Institute,What is V1 really doing in natural visual situations?, March 13, 2003.
Society for Neuroscience Symposium - Symposium Title: The role of early visual areas in cognitive aspects of vision, Talk Title: Stimulus structure and expectation reflected in the delayed responses of macaque V1 neurons, November 2001.
Stanford Research Institute, "Brightness perception and filling-in", 1990
University of Newcastle upon Tyne, Department of Psychology, “Is primary visual cortex behaviorally relevant?”, June 28, 2002.
University of Pennsylvania, Department of Psychology, “Is primary visual cortex behaviorally relevant?”, November 11, 2002.
University of California at Berkeley, School of Optometry, “What is V1 really doing in natural visual situations?”, March 14, 2003.
University of California, Davis, Center for Neuroscience, "Mechanisms underlying the perception of surfaces", 1995
University of Rochester, “What is V1 really doing in natural visual situations?”, October 21, 2003.
University of Montreal, “The critical role of eye movements in visual coding and perception”, March 2012.
University of Wisconsin, “The importance of modulatory input for V1 activity and perception”, September 14, 2004.
Winter Conference on Brain Research, "Spatial interactions in the perception of brightness", 1992.
Yale University, Department of Neurobiology, “Is striate cortex brighter than we think?” January 1997.

Active Grants

Neural Investigation of the Dual Role of Saccadic Eye Movements in Visual Perception. National Science Foundation. PI: Michael A. Paradiso. 4/1/13 – 3/31/17.

Training Grant: Interdisciplinary Vision Training Program. National Institutes of Health (NIH/NEI) T32. PI: Michael A. Paradiso. 4/1/2012 – 3/31/17.

Professional Activities

Society Membership
Society for Neuroscience
Vision Sciences Society

Service

(i) To the University
Center for Vision Research, Founding Director (2007 -)
T32 Training Grant, Interdisciplinary Vision Training Program, Director (2007 -)
Committee on Medical Faculty Appointments (CMFA) (2014 -)
Institute for Brain Science Executive Committee (2006 -)
Department of Neuroscience Promotions Committee (chair) (2015 -)
Promotion Committee, CLPS department (2015)
Sheridan Center for Teaching and Learning Advisory Board (2008 - 2015)
Brown/RISD committee on curricular collaboration
Brown 250th Celebration, classes on brain anatomy and function for Rhode Island middle school students, March 2014.

Center for Vision Research Seminars Director (2007 -)
Whalen Award Selection Committee (2012 -)
EPSCOR Student Fellowship Selection Committee (2012)
Art of Science Award, Judge (2012 -)
Prospective undergraduate student interviews and events for Brown Advancement Office (2011 -)
Institute for Brain Science Graduate Advisory Committee (2006 -)
Creative Arts Council Board Member (2009 - 2015)
Women's Softball Team Faculty Liaison (2009 -)
Department of Neuroscience, Lecturer Search Committee, Chairman (2010-2011)
Department of Neuroscience, Promotion Committee for David Sheinberg, Chairman (2010-2011)
Department of Neuroscience Admissions Committee (2010)
Department of Neuroscience Acting Chairman (2002-2003, 2005, 2011)
Department of Neuroscience Vice Chairman (2008 -)
Department of Neuroscience Search Committee Chairman (2007-2008)
Department of Neuroscience, Neuroscience Graduate Program Steering Committee (2005-)
University Task Force for Undergraduate Education (2007 - 2008)
University Task Force for Undergraduate Education Chair of Pedagogy and Assessment Subcommittee (2007 - 2008)
Division of Biology and Medicine Committee for review of policies on Reappointment, Promotion and Tenure (2006)
Department of Neuroscience Promotions Committee (1997-)
Division of Biology and Medicine Committee on Bridge Funding (2007 -)
Department of Neuroscience Acting Chairman (2003, 2005)
Department of Neuroscience Vice Chairman (2004 - 2005)
Department of Neuroscience Promotions Committee (2004 -)
Department of Neuroscience Graduate Program Director (2001 - 2004)
Department of Neuroscience Graduate Program Committee Co-director (1998 - 2001)
Department of Neuroscience Graduate Program Committee (1991 - 2004)
Department of Neuroscience Search Committees (1997-1998; 1999-2000;2001, 2002-2003)
Department of Neuroscience Undergraduate Curriculum Committee Chairman (1991-1998)
Department of Neuroscience Undergraduate Curriculum Committee (1991 - 2001)
Department of Neuroscience Host for Annual Department Reunion at Neurosci. Mtg (2001)
Department of Neuroscience Computer Coordinator (DCC) (1990-)
Department of Neuroscience Undergraduate Concentration Advisor (1990-)
Department of Neuroscience Space Committee (1997-)
Department of Neuroscience Colloquium Committee (1991-1993, 1997-2000)
Department of Neuroscience Education Task Force (1991- 1992)
Department of Neuroscience Representative at Academic Expo (1990- 1992)
Department of Neuroscience Representative at Sophomore Concentration Fair (1990-1999)
Department of Neuroscience Advisor for Independent Study and Honors (1991-)
Neuroscience Department Research Presentation at Wood's Hole (2003)
Neuroscience Department Research Presentation to Xavier College Students (2004)
Neuroscience Department Research Presentation to UMBC Students (2004)
Faculty Advisory Committee on Computing (FACC) (2000 - 2003)
Division of Biology and Medicine Life Sciences Building Committee (2000 - 2006)
Division of Biology and Medicine Search Committee for Associate Dean of Graduate and Postdoctoral Training (2005)
Division of Biology and Medicine Nominee Selection Committee for AAMC 2005 Award for Distinguished Research in the Biomedical Sciences (2005)
Biomedical Computing Committee (1995- 2000)

MD-PhD Program Interviews (1998 - 1999)
Brain Science Graduate Advisory Committee (1999-)
Brain Science Web Committee (1999-)
Brain Science Program Graduate Training Committee (2000 -)
University Selection Committee for Presidential Award for Excellence in Teaching (2006)

(ii) To the Profession

Study Section (2009-2011)
Chairman - Central Visual Processing (National Eye Institute, NIH)

Study Section (2007-2011)
Member - Central Visual Processing (National Eye Institute, NIH)

Study Section (2010)
T32 Study Section

Study Section (2007)
NEI K99 career awards, T32 training grants

Study Section (2005-2006)
Ad hoc - Central Visual Processing (National Eye Institute, NIH)

Journal Editorial Board
Vision Research (2004 -)
Journal of Vision (2006 -)

Conference Chair
National Academy of Sciences, “Fifth Annual Japanese-American Frontiers of Science Symposium”, Irvine, December 2002

Conference Executive Committee
Vision Sciences Society Second Annual Meeting, Sarasota, May, 2002
Vision Sciences Society Third Annual Meeting, Sarasota, May, 2003
Vision Sciences Society Fourth Annual Meeting, Sarasota, May, 2004
Vision Sciences Society Fifth Annual Meeting, Sarasota, May, 2005
Vision Sciences Society Sixth Annual Meeting, Sarasota, May, 2006
Vision Sciences Society Seventh Annual Meeting, Sarasota, May, 2007

Ad Hoc Reviewer
*Journals***:** Biological Cybernetics, Cerebral Cortex, Current Biology, Experimental Brain Research, Journal of Neurophysiology, Journal of Neuroscience, Nature, Nature Neuroscience, Perception, Perception and Psychophysics, Science, Vision Research, Visual Neuroscience

*Funding Agencies***:** National Institutes of Mental Health, National Science Foundation

Conference Moderator
Association for Research in Vision and Ophthalmology, Fort Lauderdale, May 2000
Society for Neuroscience, New Orleans, November 2000
Vision Sciences Society, Sarasota, May 2001
Society for Neuroscience, San Diego, November 2001

University of California, Berkeley, “Visual Function in the Brain”, November 2013.

Conference Review Board

Vision Sciences Society First Annual Meeting, Sarasota, May, 2001
Vision Sciences Society Second Annual Meeting, Sarasota, May, 2002

Conference Organizing Committee

“The Dynamic Brain”, Brown University, Providence, June, 2000
“Fourth Annual Japanese-American Frontiers of Science Symposium”, National Academy of Sciences, Tokyo, October 2001
“Fifth Annual Japanese-American Frontiers of Science Symposium”, National Academy of Sciences, Irvine, December 2002

(iii) To the Community

Consultant, Boston Community Middle Schools (1992 – 1998)
Advisory Board, Anchor Literacy Academy (2001 -)
Rhode Island Breastfeeding Coalition, Rhode Island Hospital, “Breast Feeding and the Brain” (2012)
Speaker on brain development at the national meeting of the USA LeLeche League (2006)
Lectures on art and the brain at Rhode Island School of Design (2008, 2009, 2012)
Brain Café, April 2011
Brown University, Speaker at A Day on College Hill, 2008 – 2012, 2015.
Brown University, Speaker at Family Weekend, 2011.
Brown University, New Scientist Program – Catalyst 2011 program for under-represented science students, 2011.
Brown University, Women in Science and Engineering, 2011.
Brown University, Summer Study Program, June 2011.
The Wheeler School, Talks on the brain and vision 2013, 2014, 2015.

Academic Honors, Fellowships, Honorary Societies

1984-1986	Miller Research Fellowship, University of California, Berkeley
1987-1989	Rachel C. Atkinson Fellowship for Eye Research
2002	Selected by USA National Academy of Sciences to Chair the Fifth Annual Japanese-American Frontiers of Science Symposium at the Beckman Inst.
2006-2008	Elizabeth H. LeDuc Award for Teaching Excellence in the Life Sciences
2006-	Fox Professor of Ophthalmology and Visual Sciences
2007	Undergraduate Council of Students Award for Excellence in Teaching
2014	Harriet W. Sheridan Award for Distinguished Contributions to Teaching and Learning

Teaching

Regular Courses

The Brain: An Introduction to Neuroscience, course director and lecturer,NEUR0010 (2003-)

Cells and Circuits of the Nervous System, NEUR 1500 at Pfizer (2010)

From Neurons to Perception, NEUR 1930, course director and lecturer (2004-)

Brain Sciences, Integrated Medical Curriculum, BIOL 3652, lecturer (2006-)

Cognitive Neuroscience, BN 166, lecturer (2007 - 2008)

Advanced Systems Neuroscience, NEUR 2050, lecturer (2005-)

Human Neurobiology, BN 260, lecturer (2004)

Brain Like Computing, CG 186, lecturer (2004)

The Brain: An Introduction to Neuroscience, lecturer, BN001 (1990- 2002)

Neural Information Processing, course director and lecturer, BN093 (1990-1996)

Computational Neuroscience, course director and lecturer, BN168 (1996- 2002)

Neuroengineering, lecturer, EN122 (1990)

An Introduction to the Brain, lecturer (Pfizer, Inc.) (1993)

Topics in Cognitive Science, lecturer, CG186 (1999)

Neuroscience Fundamentals for Non-Biologists, lecturer (2000)

Structure, Function and Development of the Visual System (Cold Spring Harbor) (2001)

Off-Campus Courses

Boston University, Models of Visual Perception (CN 730), guest lecturer

Introduction to Neuroscience, MIT, lecturer (2006 – 2008, 2010)

Pfizer Pharmaceutical, Cells and Circuits of the Nervous System (NEUR1500), course director and lecturer, Fall 2010

Independent Study Students (BN 195/196)

Morgan Talbot (2016-)
Luke Irwin (2014 -)
Calin Manea (2014 -)
Camille Briskin (2012 - 2015)
Seth Akers-Campbell (2011 - 2015)
Mike Chua (2010 – 2013)
Zachary Duhaime (2011 - 2012)
Alejandro Guitterez (2009 - 2010)
Theresa Lii (2009 - 2010)
Jesssica Resvick (2008 - 2010)
Conrad Stern-Ascher (2008 - 2009)
Jordan Pisarcik (2007 - 2009)
Sam Levine (2007 - 2009)
Joshua Bronson (2006)

Emily Stephen (2006 - 2007)
Dana Kroplick (2005 - 2006)
Andrew Geneslaw (2004 - 2006)
David Sobel (2003-2004)
Michael Kurtz (2001 - 2003)
Tim Hanks (2000 - 2002)
Jessica Ciralsky (1999 - 2000)
David Mintz (1997 - 1999)
Jill Hall (1996 - 1998)
Sean Macevoy (1996 - 1997)
Smita Nayak (1995 - 1996)
Woo Jin Kim (1995 - 1996)
Charles Kim (1993 - 1995)
Sanjay Magavi (1993 - 1995)
Sigrid Hahn (1993 - 1994)

Honors theses directed

Calin Manea (2016)
Jordan Pisarcik (2008)
Sam Levine (2008)
Emily Stephen (2007)
Michael Kurtz (2003)
Tim Hanks (2002)
David Mintz (1999)
Jill Hall (1998)
Sean Macevoy (1997)
Smita Nayak (1996)
Woo Jin Kim (1996)
Sanjay Magavi (1995)
Sigrid Hahn (1994)

Current Postdoctoral Fellow

James Niemeyer

Current Graduate Students

Seth Akers-Campbell (rotating 1st year student)
Jacqueline Hynes

M.Sc. directed

Seth Blau (2003)
Gideon Shalev (2006)

Outside thesis reader

Chou Hung (Anna Roe laboratory, Yale neurobiology) *Building surfaces from borders*

Ph.D. theses directed

Andrew F. Rossi (1996) *Neural mechanisms of brightness perception.*
Current Position: Program Director, National Institute of Mental Health
Xin Huang (2002) *The temporal representation of visual information.*
Current Position: Assistant Professor, University of Wisconsin
Sean MacEvoy (2003) *Contextual influences on the responses of neurons in*

cortical area V1. Current Position: Assistant Professor, Boston College.
Catherine Clarke Wells (2005) *The complex spatial topography of visual attention.*
Current Position: Radiologist, Albany Medical Center
James Niemeyer (2015), *The effect of natural vision on perception and V1 neural activity.*
Current position: Paradiso lab postdoctoral fellow

Ph.D. thesis co-directed with Dr. Mark Bear

Cynthia D. Rittenhouse (2000) *Visual Cortical Plasticity*
Current Position: Assistant Professor (research), University of Rochester

Ph.D. dissertation committees (Neuroscience unless noted otherwise)

Current
Jacqueline Hynes
Michael Rule
David Alex Mely (CLPS)
Shaobo Guan
Brandon King

Past
Mark Sanderson
Mikhail Serruya
Chou Hung (Yale Neurobiology)
Cindi Rittenhouse
Dawn Vreven (Psychology)
Bettina Acuna
Charlie Law
Prestor Saillant
John Stein
Erik Sklar
Andrew Rossi
Xin Huang
Catherine Clarke/Wells
Sean MacEvoy
Nestor Matthews (Psychology)
Misha Frenkel
Ryan Mruczek
Carlos Vargas-Irwin
Luke Woloszyn
Ben Philip
Lachlan Franquemont

Postdoctoral trainees
Dar Meshi
James Niemeyer
Octavio Ruiz

Advising

13 Neuroscience concentration advisees
6 sophomore advisees

4 freshman advisees

Brown University Lectures

A Day on College Hill, 2008 – 2012, 2015

Grantsmanship I: The R01, Nov 30 2012 (grant writing workshop for Biomed postdocs and research faculty)

Brain Science 10th Anniversary Vision Panel, moderator, 2010

Family Weekend Forum October 15, 2011

Neuroscience DUG, 2007

Summer study students, 2007 – 2011

Brown University, New Scientist Program – Catalyst 2011 program for under-represented science students, August 2011.

Brown University, New Scientist Program – Catalyst 2011 program for under-represented science students, August 2012.

Brown University, New Scientist Program – Catalyst 2011 program for under-represented science students, August 2013.

Brown University, New Scientist Program – Catalyst, August 2012.

Women in Science and Engineering, October 2007

Women in Science and Engineering, February 2011

Women in Science and Engineering, October 2013

Sarah Doyle Womens' Center, April 2007

Neuroscience Graduate Recruiting, February 2008

Neuroscience Graduate Recruiting, February 2010

Neuroscience Graduate Program Ethics and Skills Workshop 2010

Neuroscience Graduate Program Ethics and Skills Workshop April, 2011