CURRICULUM VITAE
Columbia University Format

1) DATE OF C.V.:

October 14, 2009

2) PERSONAL DATA:

Name:	Joy Hirsch, Ph.D.
Address:	Neurological Institute B-41, Box 108 Columbia University 710 West 168th Street New York, NY 10032
Telephone:	(212) 342-0291
Fax:	(212) 342-0851
E-Mail:	jh2155@columbia.edu
Web:	www.fmri.org
Place of Birth**:**	Salem, Oregon
Citizenship:	USA

3) ACADEMIC TRAINING:

University of Oregon
1969, B.S., Life Sciences
Eugene and Portland, OR

Portland State University
1971, M.S., Psychology
Portland, OR

Columbia University
1977, Ph.D., Psychology
New York, NY

Thesis:	Properties Of Human Visual Spatial-Frequency Selective Systems: A Two-Frequency Two-Response Recognition Paradigm
Sponsor:	Professor Norma Graham, Department of Psychology, Columbia University
Citation:	Hirsch, J., Hylton, R., and Graham, N. Simultaneous Recognition of Two Spatial-Frequency Components *Vision Research*, 22, 365-375, 1982.

4) TABLE OF CONTENTS:

1) Date of C.V. 01
2) Personal Data 01
3) Academic Training 01
4) Table of Contents 02
5) Traineeship 03
6) Board Qualification 03
7) Military Service 03
8) Professional Organizations and Societies 03
9) Academic Appointments ..... 03 - 04
10) Hospital Appointments ..... 04 - 05
11) Honors ..... 05 - 14
12) Grant Support 15-31
12a) Previous Grant Support 15-18
12b) Previous and Current Training Grants 18-19
12c) Previous NRSA Support 19
12d) Active Grant Support 19-23
12e) Active K and NRSA Awards 24
12f) Pending Student and Fellow Training Grants 25
12g) Pending Grant Support 26-28
12h) Applications in progress 28-31
13) Selected Departmental and University Committees 32
14) Teaching Experience and Responsibilities
Courses Organized and Taught 33-34
14a) Selected Annual Lectures in Academic Courses 34-36
14b) Student Thesis Sponsorship 36-40
14c) Current Graduate Students 41
14d) Thesis Examination Committees 41-43
14e) Post-Doctoral and Fellow Trainees 44-46
14f) Student Trainees/Summer/Visiting Scientists 47-67
15) Other Professional Activities 67-68
16) Publications
A. Original Peer Review Articles 69-74
B. Invited Chapters, Reviews, Editorials, Books 74-75
C. Patents 76
D. Abstracts 76-88
E. Papers Submitted and In Peer Review 88

5) TRAINEESHIP:

1977 - 1979 **Research Associate**
Department of Ophthalmology and Visual Science
Yale University School of Medicine, New Haven, CT

6) BOARD QUALIFICATION: N/A

7) MILITARY SERVICE: N/A

8) PROFESSIONAL ORGANIZATIONS AND SOCIETIES:

Human Brain Mapping
Society for Neuroscience
Cognitive Neuroscience Society
International Society for Magnetic Resonance Imaging
New York Academy of Sciences
Association for Research in Vision and Ophthalmology
Vision Sciences Society
American Association for the Advancement of Science
Association for the Scientific Study of Consciousness
Radiological Society of North America
International Society for Magnetic Resonance in Medicine

9) ACADEMIC APPOINTMENTS:

1979 - 1984 **Assistant Professor**
Department of Ophthalmology and Visual Science
Yale University School of Medicine, New Haven, CT

1984 - 1987 **Associate Professor**
Department of Ophthalmology and Visual Science
Yale University School of Medicine, New Haven, CT

1987 - 1992 **Associate Professor (Tenure)**
Department of Ophthalmology and Visual Science
Graduate Program in Neuroscience
Yale University School of Medicine, New Haven, CT

1992 - 2002 **Member (Tenure)**
Sloan-Kettering Institute of Memorial Sloan-Kettering Cancer Center
Program of Molecular Pharmacology and Therapeutics
New York, NY

1992 - 2002 **Professor of Neuroscience**
Graduate Program in Neuroscience
Weill Graduate School of Medical Sciences at Cornell University
New York, NY

1993 - 2002 **Professor of Molecular Pharmacology and Therapeutics (Tenure)**
Sloan-Kettering Division
Weill Graduate School of Medical Sciences at Cornell University
New York, NY

2002 - 2006 **Professor of Neuroscience (Adjunct)**
Graduate Program in Neuroscience
Weill Graduate School of Medical Sciences at Cornell University
New York, NY

2002 - Present **Professor of Functional Neuro-Radiology (Tenure)**
Director, functional MRI Research Center
Department of Radiology
Columbia University
New York, NY

2003 - Present **Professor of Psychology**
Department of Psychology
Columbia University
New York, NY

2007 - Present **Professor of Neuroscience**
Department of Neuroscience
Columbia University
New York, NY

2008 - Present **Director, Program for MR Imaging and Cognitive Sciences**
Department of Radiology
Columbia University
New York, NY

10) HOSPITAL APPOINTMENTS:

1992 - 2002 **Attending Physiological Psychologists**
Department of Neurology
Memorial Hospital for Cancer and Allied Diseases
New York, NY

2007 - Present **Residency Training Faculty**
Department of Radiology
Harlem Hospital
New York, NY

11) HONORS (<u>Selected Invited Lectureships Related to fMRI - 1995 to Present</u>):

Lecture: American Diabetes Association 69th Scientific Sessions
Title: Imaging the "Food Seeking" Brain
Location: New Orleans, LA
Date: June 6, 2009

Lecture: Invited Speaker for the NeuroEthics Class at the American Musesum of Natural History
Title: The Discovery of Principlesof Brain/Mind Operations
Location: American Museum of Natural History, New York, NY
Date: May 13, 2009

Lecture: Exhibition Team at the American Museum of Natural History
Title: Imaging Bran and Mind
Location: Program for Imaging & Cognitive Sciences, New York, NY
Date: April 24, 2009

Lecture: Spring 2009 Division of Biostatistics Seminar Series
Title: Functional Brain Imaging: Experimental Design and Statistical Adaptations
Location: Columbia University Medical Center, New York, NY
Date: April 21, 2009

Lecture: George Gamow Memorial Lecture
Title: Dialogues within the Specialized Brain
Location: University of Colorado at Boulder, Boulder, CO
Date: April 2, 2009

Lecture: Neuroscience and Psychology Seminar
Title: What the Human Face Tells the Human Brain: Functional Specificity and Corical Mechanisms that Regulate Emotion and Cognition
Location: University of Colorado at Boulder, Boulder, CO
Date: April 2, 2009

Lecture: John Theurer Cancer Center's Fifth Annual Neurooncology Symposium

Title: Functional MRI and the Mangement of Brain Tumors: Techniques and Limitations
Location: David Joseph Juris Research Center for Tomorrows Children, Hackensack, NJ
Date: March 27, 2009

Lecture: Pediatric Endocrinology Seminar
Title: The Science of Mind Leads to the Treatment of Mind
Location: New York Presbyterian Hospital, New York, NY
Date: February 3, 2009

Lecture: Radiology Interest Group
Location: Columbia University Medical Center, New York, NY
Date: October 31, 2008

Lecture: Neuroimaging in Traumatic Brain Injury Symposium
Title: Seeking Consciousness: An fMRI Study of Command Following in Nonresponsive Patients
Location: Cleveland Clinic, Cleveland, OH
Date: October 31, 2008

Lecture: NIDDK Neuroimaging in Obesity Research
Title: Leptin, Hypothalamus, and Human Cortex before and after weight loss
Location: National Institue of Health, Bethesda, MD
Date: October 28, 2008

Lecture: Radiology Grand Rounds
Title: The Science of Mind Leads to the Treatment of Mind
Location: Department of Radiology, Columbia University Medical Center, New York, NY
Date: September 24, 2008

Lecture: Colloquium Series on Health, Law, and Society
Title: The Anatomy of a Lie and the Law
Location: Columbia University Law School, New York, NY
Date: September 10, 2008

Lecture: 12th International Conference on Cognitive and Neural Systems
Title: Functional Specificity and Cortical Mechanisms That Regulate Emotion and Cognition: What The Human Face Tells The Human Brain.
Location: Boston University, Boston, MA
Date: May 16, 2008

Lecture: Neurosurgery Grand Rounds

Title: What the Brain Thinks: Functional MR Scans
Location: Winthrop University Hospital, Mineola, New Jersey
Date: April 26, 2008

Lecture: Cognitive Neuroscience Society Annual Meeting
Title: Making Sense of the World: How the brain integrates local and distributed processing in visual cognition
Location: San Francisco, CA
Date: April 12, 2008

Lecture: Lupus New York Conference on Systemic Lupus Erythematosus and Cognitive Dysfunction
Title: Functional MRI: Basis and Applications for Understanding Cognitive Dysfunction in SLE
Location: New York, NY
Date: April 7, 2008

Lecture: American Society for Functional Neuroradiology
Title: The Science of Mind Leads to the Treatment of Mind
Location: Orlando, FL
Date: February 29, 2008

Lecture: Invited Seminar, Yale University School of Medicine
Title: Future Directions for Translational Imaging
Location: Yale University, New Haven, CT
Date: October 29, 2007

Lecture: American Academy of Psychiatry and the Law
Title: Is the Anatomy of a Lie a Matter of the Law?
Location: Miami, FL
Date: October 18, 2007

Lecture: GadgetOff 2007
Title: The Brain: The Neatest Gizmo on Earth
Location: Liberty Science Center, Jersey City, NJ
Date: September 28, 2007

Lecture: Invited Lecture, Department of Psychology, Yale University
Title: Functional Specificity and Cortical Mechanisms that Regulate Emotion and Cognition: What the human face tells the human brain
Location: Yale University, New Haven, CT
Date: September 26, 2007

Lecture: Gordon Research Conferences - Amygdala in Health and Disease
Title: Amygdala-frontal interactions and reward expectations
Location: Bates College, Lewiston, ME
Date: August 3, 2007

Lecture: Ethics, Imaging and Limited States of Consciousness
Title: Considerations for Clinical Ethics
Location Stanford University Center for Biomedical Ethics
Date: June 28, 2007

Lecture: Gordon Research Conferences - Neural Circuits and Plasticity
Title: Human Cognition
Location: Salve Regina University, Newport, RI
Date: July 5, 2007

Lecture: Café Science Public Lecture Series: Columbia University
Title: Neuroeconomics…Imaging Mind over Money
Location: PicNic Cafe, New York, NY
Date: July 9, 2007

Lecture: Transrobotism Conference: Of Human-Robot Bonds
Title: Facial and Emotional Processing: Topics in Neuroimaging
Location: Massachusetts Institute of Technology, Cambridge, MA
Date: April 24, 2007

Lecture: Clinical Vision Sciences Seminar
Title: Functional Imaging: New View of the Biology of Mind and Clinical Opportunities
Location: Weill Medical College at Cornell University, New York, NY
Date: April 20, 2007

Lecture: Emerging Issues in Modern Medicine Series
Title: Advances in Functional Imaging of the Brain and the New Science of Mind
Location: SUNY-Downstate Medical Center, Brooklyn, NY
Date: March 2, 2007

Lecture: Grand Rounds, Department of Psychiatry and Behavioral Sciences
Title: The Fine Spatial Grain of Neural Mechanisms for Cognitive, Emotional, and Perceptual Control
Location: Beth Israel Medical Center, New York, NY

Date: February 15, 2007

Lecture: Grand Rounds, Department of Neurology
Title: Neural Regulation of Emotion, Perception and Cognition: Recent Findings and a New Role For Functional Specificity
Location: Columbia University Medical Center, New York, NY
Date: January 17, 2007

Lecture: Radiology Lecture Series
Title: Neural Circuits for Purposeful Regulation of Perception, Cognition, and Emotion
Location: Harlem Hospital, New York, NY
Date: December 18, 2006

Lecture: Neuro-Psychoanalysis Lecture Series
Title: Neural Circuits That Underlie Emotion and Cognition
Location: New York Psychoanalytic Institute, New York, NY
Date: November 4, 2006

Lecture: Panel Discussion: "Information Mapping. So Now We Can See it All?"
Title: Mapping Information in the Brain
Location: The New School, Theresa Lang Community & Student Center, New York, NY
Date: September 25, 2006

Lecture: Annual Meeting: Association for Aging Research -"Imaging & the Aging Brain"
Title: Assessment of Brain Function in Patients with Traumatic Brain Injury & Altered States of Consciousness: Using Functional MRI
Location: New York University Kimmel Center, New York, NY
Date: May 17, 2006

Lecture: GE Whitney Symposium
Title: Imaging Brain and Imaging the Inner World of Mind
Location: GE Global Research Center, Niskayuna, NY
Date: March 20, 2006

Lecture: Philosophy-Neuroscience Seminar (Rafa Yuste, Seminar Director)
Title: The Anatomy of Consciousness
Location: Columbia University, New York, NY
Date: February 7, 2006

Lecture: Instituto Gulbenkian de Ciencia

Title: Neuroimaging: A new view of brain and mind
Location: Instituto Gulbenkian de Ciencia , Lisbon, Portugal
Date: December 12, 2005

Lecture: Grand Rounds
Title: Functional Brain Maps for Clinical Practice
Location: Roosevelt Hospital, New York, NY
Date: November 9, 2005

Lecture: Tongji University
Title: From Brain to Mind: Neuroimaging and a New View of Cognition
Location: Tonghi University, Shanghai, China
Date: October 20, 2005

Lecture: Peking Union Medical College
Title: From Brain to Mind: Neuroimaging and a New View of Cognition
Location: Peking Union Medical College, Beijing, China
Date: October 17, 2005

Lecture: Visiting Fellowship in MRI
Title: Neuroimaging and Clinical Applications
Location: Harvard University, Cambridge, MA
Date: October 5, 2005

Lecture: Canadian Institute of Health-Vision Health Research Summer Workshop
Title: Functional MRI and Frontiers in Personalized Medicine
Location: York University, Toronto, Canada
Date: July 19, 2005

Lecture: Hard Science Hard Choices
Title: fMRI and Disorders of Consciousness
Location: Library of Congress, Washington, DC
Date: May 10, 2005

Lecture: Guest *Lecture:* Frontiers in Modern Medicine Series
Title: Advances in Neuroimaging and Advantages in Neuro-Medicine
Location: Down State University Medical Campus, Brooklyn, NY
Date: March 2, 2005

Lecture: Grand Rounds
Title: Frontiers in Neuroradiology
Location: Harlem Hospital Center, New York, NY
Date: February 7, 2005

Lecture: NYSTAR – Center for Advanced Information Management Technical Forum
Title: Future Directions for Applications in Functional Brain Imaging
Location: New York Academy of Science, New York, NY
Date: October 12, 2004

Lecture: Association for the Scientific Study of Consciousness
Title: The Imaging of Brain and Mind During Conscious and Unconscious States
Location: Antwerp, Belgium
Date: June 26, 2004

Lecture: United Cerebral Palsy Research and Education Foundation: Annual Meeting
Title: Functional Brain Mapping and Frontiers in Cerebral Palsy Research
Location: The Light House, New York, NY
Date: June 23, 2004

Lecture: Visiting Faculty in MRI at Massachusetts General Hospital
Title: Clinical Applications: fMRI in Practice
Location: Harvard University, Cambridge, MA
Date: May 4, 2004

Lecture: American Association of Physicists in Medicine
Title: functional MRI for Clinical Applications
Location: Thomas Jefferson University, Philadelphia, PA
Date: April 14, 2004

Lecture: Psychiatry Grand Rounds,
Title: The Neuroanatomy of Therapy and Learning-induced Cortical Changes in Language and Sensory Systems: An fMRI Investigation
Location: St. Vincent's Hospital, New York, NY
Date: January 22, 2004

Lecture: Language and Cognition Seminar Series
Title: The Anatomy of Second Language Acquisition: fMRI Investigations
Location: Northwestern University, Evanston, IL
Date: November 24, 2003

Lecture: Columbia West Program, Southern California Alumni
Title: The Geography of Mind: Mapping Brain and Behavior with Functional MRI
Location: Skirball Center, Los Angeles, CA
Date: November 9, 2003

Lecture: 15th Annual Conference on Rebuilding Shattered Lives: Functional Neuroimaging

Applications in Disorders of Consciousness
Title: Functional Neuroimaging of Cognition
Location: JFK Conference Center, Edison, NJ
Date: November 5, 2003

Lecture: RSNA 2002 Neural Imaging Symposium
Title: Imaging Brain Function: Frontiers in Computation and Medicine
Location: Chicago, IL
Date: December 4, 2002

Lecture: International Conference on Pain and Chemical Dependency
Title: "Views on Neuroimaging: Pain and Analgesia"
Location: New York, NY
Date: June 6, 2002

Lecture: 14th. Annual NYS Office of Mental Health Research Conference, New York State Office of Mental Health
Title: "Imaging Cognitive Processes: The Revolutionary Advantages of fMRI in Medicine
Location: Albany, NY
Date: December 4, 2001

Lecture: New York County Medical Society
Title: "The Brain at Work: Functional MRI"
Location: The Rockefeller University, New York, NY
Date: October 2, 2001

Lecture: IBM Research-Thomas J. Watson Center
Title: "Imaging the Mind at Work: New Computational Challenges"
Location: Yorktown Heights, NY
Date: June 20, 2001

Lecture: Royal Society of Medicine: Invited lecture
Title: "Overview: fMRI In Drug Evaluation of CNS Compounds fMRI To Evaluate Effectiveness In Neuropathic Pain fMRI In Healthy Subjects To Evaluate Anxiolytic Drugs"
Location: London, UK
Date: June 7, 2001

Lecture: Distinguished Faculty Lecture honoring Sadek K. Hilal
Title: "Continuing a Tradition of Excellence in Imaging at Columbia: Future Directions of fMRI" Columbia University

Location: New York, NY
Date: May 23, 2001

Lecture: New York Hall of Science
Title: "Imaging the mind at work"
Location: Corona Park, NY
Date: January 18, 2001

Lecture: Albert Einstein College of Medicine
Title: "Network Elements for Human Cognition: Evidence from fMRI"
Location: Bronx, NY
Date: December 13, 2000

Lecture: American Pain Society 19th Annual Scientific Meeting
Title: "Novel Approaches to the Understanding and Treatment of Neuropathic Pain"
Location: Atlanta, GA
Date: November 3, 2000

Lecture: Fourth Annual W. S. Battersby Memorial Lecture
Title: "The Neurobiology of Fundamental Cognitive Tasks: Insight for fMRI studies"
Location: Queens College, CUNY, Flushing, NY
Date: October 11, 2000

Lecture: Nathan Kline Institute
Title: "Investigation of Large-scale Cortical Systems for Fundamental Cognitive Tasks"
Location: Westchester, NY
Date: September 13, 2000

Lecture: Brain Awareness Annual Lecture
Title: "Long-Range Networks for Cognition: fMRI Investigations"
Location: Dalhousie University: Neuroscience Institute, Halifax, Canada
Date: March 27, 2000

Lecture: Gordon Research Conference
Title: "Functional Plasticity for Language Acquisition: Evidence from fMRI"
Location: Newport, RI
Date: July 23, 1999

Lecture: Stereotactic, Functional and Restorative: Invited lecture
Neurosurgery: International Conference
Title: "Functional Brain Imaging—Functional MRI (fMRI)"
Location: New York University, New York, NY

Date: June 10, 1999

Lecture: Deutsche Gesellschaft für Neurochirurgie Conference
Title: Functional Magnetic Resonance Imaging for "Neurosurgical Planning: Sensitivity and Specificity using fMRI"
Location: Munich, Germany
Date: June 8, 1999

Lecture: New York Academy of Sciences
Title: "Core Networks as Elements of Human Cognition: Evidence from fMRI"
Location: New York, NY
Date: February 3, 1999

Lecture: Charles A. Dana Foundation Symposium
Title: "Identification of Cortical Pathways participating in pain relief using fMRI"
Location: Los Angeles, CA
Date: November 12, 1998

Lecture: College de France: Neuroscience Colloquium: Invited lecture
Title: "Core Networks for Cognition Evidence from fMRI"
Location: Paris, France
Date: October 5, 1998

Lecture: Neurobiology Program Seminar: Invited lecture
Title: "Assemblies of Core Networks for Human Cognition"
Location: California Institute of Technology, Pasadena, CA
Date: June 4, 1998

Lecture: National Institute of Bioscience and Human-Technology: Invited symposium lecture
Title: "fMRI reveals 'Top-Down' Influences on Human Primary Visual Cortex"
Location: Tsukuba, Japan
Date: December 8, 1997

Lecture: New York Hall of Science: Keynote speaker
Title: "Mapping the Mysteries of the Brain"
Location: New York, NY
Date: October 19, 1997

Lecture: Neuroscience Symposium: Invited lecture
Title: "Applications of fMRI to Neurosurgical Planning and Investigations of Human Visual and Language Processes"
Location: Yale University School of Medicine, New Haven, CT

Date: February 20, 1997

Lecture: Neurobiology Seminar: Invited lecture
Title: "Partitioning Cognitive Events with fMRI"
Location: Weizmann Institute, Rehovat, Israel
Date: December 16, 1996

Lecture: Gordon Conference on the Chemical Senses: invited lecture
Title: "Localization of cortical taste areas with fMRI"
Location: Newport, RI
Date: August 21, 1996

Lecture: Neurobiology Colloquium: Invited lecture
Title: "Fundamental Human visual processes revealed by fMRI"
Location: University of Massachusetts, Amherst, MA
Date: December 6, 1995

OTHERS:

Fellow, Calhoun College, Yale University, 1985 - 1992
Leah Lowenstein Award for teaching Medical Students, Yale University, May 20, 1989
Medical School Council, Yale University, 1981 - 1984; 1989 - 1991 (Elected)
New York Hall of Science Distinguished Science Sponsor, 2001 - 2006
Appreciation Award-TARDEC, US Army Research, Development & Engineering Command, 2006
Sadek K. Hilal Faculty Research Award, Department of Radiology, Columbia University, 2006

13) SELECTED DEPARTMENTAL AND UNIVERSITY COMMITTEES:

Committee	*Location*	*Date*
Affirmative Action	Yale University	1985 - 1989
Curriculum	Yale University School of Medicine	1984 - 1987
Well-Being of Students	Yale University School of Medicine	1984 - 1988

Status of Women	Yale University School of Medicine	Chair, 1982 - 1989 Adjunct, 1989 - 1991
Admissions, Graduate Program in Neuroscience	Weill Graduate School of Medical Sciences at Cornell University	Chair, 1993 - 1997
Admissions, Tri-Institutional MSTP Program	Weill, Rockefeller, MSKCC	1993 - 1997
Executive, Tri-Institutional Vision Training Program	Weill Graduate School of Medical Sciences at Cornell University	1993 - 1997
Graduate School Planning Task Force	Weill Graduate School of Medical Sciences at Cornell University	1997 - 1998
Development Advisory Committee	College of Physicians and Surgeons Columbia University	2006 - Current
Neuroimaging Advisory Committee	Columbia University Medical Center	Chair, 2006 - Current
Curriculum Committee	Department of Neuroscience, Columbia University	2007 - Current
Dean's Advisory Committee for Development (Thematic Priorities Subcommittee)	Columbia University Medical School	2007 - Current
Advisory Board for Masters of Bioethics Program	Columbia University	2008 - Current

14) TEACHING EXPERIENCE AND RESPONSIBILITIES:
COURSES ORGANIZED AND TAUGHT:

Course Title	***Location***	***Enrollment (Approximate)***	***Dates Taught***
Introduction to Biomedical Statistics	Yale University School of Medicine	30	1979 - 1984
Data Analysis and Research Methods for Medical Sciences	Yale University School of Medicine	20	1982 - 1987

Digital Image Processing (Selected Lectures)	Yale University School of Medicine	40	1985 - 1987
Automated and Semi-Automated Visual Fields	American Academy of Ophthalmology	80	1983 - 1987
Functional Neuroimaging of the Human Brain	Weill Graduate School of Medical Sciences at Cornell University	40	1995 - 1998
Functional Neuroimaging of Human Brain (70804 NBHV G4320 001 NBIO 030)	Columbia University, Center for Neurobiology and Behavior (Course Director: Joy Hirsch)	16	Fall 2002
Imaging Brain and Cognition (57850 NBH, G4320, NBIO030)	Columbia University, Center for Neurobiology and Behavior (Course Director: Joy Hirsch)	36	Fall 2004
Issues in Brain and Behavior (W3440x)	Columbia University, Department of Psychology (Course Directors: Don Hood & Joy Hirsch)	15 10 17	Fall 2003 Spring 2005 Fall 2005
Graduate Independent Study in Functional Brain Mapping (25565 GP9500)	Columbia University, Center for Neurobiology and Behavior (Amit Etkin, Kristen Klemenhagen)	2	Spring 2003
Undergraduate Independent Study (W3950 026)	Columbia University Departments of Psychology and Biology (Kelly Remole, Maria Michael, Shira Levy, Ruht Poltrack)	1 1	Spring 2004 Fall 2004 2005 2006
Workshop and Seminar Series: Issues and Practice: Functional Neuroimaging	Columbia University fMRI Research Center	50	Spring / Summer 2004, 2005, 2006

14a) <u>Selected Annual Lectures in Academic Courses</u>:

Lecture Title	*Course Title*	*Institution*	*Dates Taught*

The Executive Brain	Frontiers of Science	Columbia University	May 4, 2009
The Specialized Brain	Frontiers of Science	Columbia University	April 27, 2009
Frontiers of Science	Cognition and the Brain (PSYC W2215)	Columbia University	February 18, 2009
Functional Brain Imaging	Basic and Clinical Neuroscience (CME)	Columbia University	February 16, 2008, February 21, 2009
Frontiers of Science and Emerging Ethics	Ethics for Biomedical Engineers (E4010)	Columbia University	February 4, 2009
Functional Neuroimaging	Neural Science (Columbia Medical School) (ANPH M5105.081)	Columbia University Medical Center	2000, 2001,2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009
Functional Brain Imaging	Basic and Clinical Neuroscience (CME)	Columbia University	2004, 2005, 2006, 2007, 2008, 2009
The Science of Mind Leads to the treatment of Mind: Clinical Applications of fMRI	P8102 Basic Laboratory Methods: Tools for Translational Research	Columbia University Medical Center	2007, 2008
Future Directions for Translational Neuroimaging	Ethics and Experimentation BEPS W4090	Columbia University	2007, 2008
Neural Correlates of Consciousness: From Brain to Mind	Frontiers of Science: (BIOL G9302.001.2002.1)	Columbia University	2004, 2005, 2006, 2007, 2008

Frontiers of the Mind I	Frontiers of Science: (BIOL G9302.001.2002.1)	Columbia University	April 30, 2007
Neural Correlates of Consciousness	Neural Science (Columbia Medical School) (ANPH M5105.081)	Columbia University Medical Center	2006, 2007
Neurocircuitry of Cognitive Control Mechanisms: Evidence from Neuroimaging; The Neural Correlates Of Consciousness: From Brain To Mind	Neurobiology II: Neuronal Circuits (W3005y) (Kavli Institute of Brain Science)	Columbia University	2006, 2007
The Neurosystem at Work	PROSEMINAR I (PSYC G6001.001)	Columbia University	September 13, 2006
Clinical Applications: fMRI in Practice	MRI Fellowship at Massachusetts General Hospital/ Robert Savoy, Director	Harvard University	March 4, 2003 June 3, 2004 June 23, 2005 October 5, 2005
Radiology and Clinical fMRI	Radiology Resident Training Program	NYPH/ Columbia University	2005
Mapping Human Language: What We Learn from fMRI	Language Development (Cornell Linguistics Department, Barbara Lust, Professor)	Cornell University (Ithaca)	2001, 2002, 2003
Functional Imaging of The Brain	Engineering in Medicine (BMEN E1001) (Columbia Biomedical Engineering Al Wald, Professor)	Columbia University	2001, 2002, 2003

14b) <u>Student Thesis Sponsorships</u>:

Student: Sylvia Beck
Training Period: 1979 - 1982
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Selective Contrast Sensitivity Loss in Strabismic Amblyopia

Student: David Ming Young
Training Period: 1980 - 1984
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Visual Mislocalization Associated With Extraocular Muscle Disorders

Student: Jon Younger
Training Period: 1979 - 1983
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Effects of Constant Infusion Insulin Pump Therapy on Contrast Sensitivity in Type I Diabetics

Student: Eric Ron Jakelovits
Training Period: 1983 - 1987
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: The Assessment of Retinal Function in Cataract Patients Using Laser Interferometry

Student: Subba R. Gollamudi
Training Period: 1983 - 1987
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: An Evaluation of Corrected Loss Variance as a Useful Field Index in Glaucoma

Student: David B. Granet
Training Period: 1983 - 1987
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Vernier Acuity and Motion: A Comparison of Athletes and Non-Athletes

Student: Peggy Mei-Chi Liao
Training Period: 1984 - 1988
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Corrected Loss (Standard Deviation) Can Discriminate Between Control Subjects and Glaucoma Suspect Patient with No Loss of Visual Sensitivity

Student: Michael Morris
Training Period: 1985 - 1989
Degree: M.D.

Institution: Yale University School of Medicine
Title of Thesis: Laser Interferometric Predictions of Contrast Sensitivity Following IOL Implantation

Student: Leslie Mosell Sims
Training Period: 1985 - 1989
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Computerized Automated Perimetry: An Assessment of Visual Field Changes Before and After Focal Photocoagulation for Clinically Significant Diabetic Macular Edema

Student: Zachary G. Klett
Training Period: 1985 - 1989
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: The Correlation between Objective Lens Opacity and Laser Interferometric Contrast Sensitivity in the Cataract Patient

Student: Daniel J. Cher
Training Period: 1986 - 1990
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Simulation of Imaging, Localization and Spatial Discrimination of Dot Stimuli Based upon a Simple Model of Retinocortical Mapping and the Human Photoreceptor Lattice

Student: Chander N. Samy
Training Period: 1986 - 1990
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Comparison of Human and Monkey Retinal Photoreceptor Sampling Mosaics

Student: Mark S. Bianchi
Training Period: 1987 - 1991
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: The Topography of the Human Photoreceptor Sampling Mosaic in Peripheral

Student: Lisa A. Grohskopf
Training Period: 1989 - 1993
Degree: M.D.
Institution: Yale University School of Medicine

Title of Thesis: Random Dot Displacement Discrimination is Influenced by Dot Array Shape

Student: Stacy Raymond
Training Period: 1989 - 1993
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: The Effects of Uncertainty on the Precision of Human Dot Displacement Discrimination

Student: Jack Gallant
Training Period: 1985 - 1989
Degree: Ph.D.
Institution: Yale University (Graduate Program: Neuroscience and Psychology)
Title of Thesis: Mechanisms of Spatial Selective Attention

Student: Karl Kim
Training Period: 1994 - 2000
Degree: Ph.D/M.D. (Graduate Program: Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Sciences at Cornell University
Title of Thesis: Multiple Language Representations in the Human Brain
Awards: Julian R. Rachele Prize, Cornell University Graduate School of Medical Sciences, New York, NY, Medical Student Research Award, the Associated Medical Schools of New York, Vincent du Vigneaud Prize, Cornell University Graduate School of Medical Sciences, NY, NY

Student: Viorica Marian
Training Period: 1998 - 2000
Degree: Ph.D.
Institution: Cornell University
Title of Thesis: Bilingual Language Processing: Evidence from Eye-Tracking and Functional Neuroimaging (Sponsorship jointly shared with Professor Ulrich Neisser, Department of Psychology)

Student: Tobey Doelman
Training Period: 1997 - 1999
Degree: Ph.D.
Institution: Cornell University
Title of Thesis: The role of phonological features in the internal representation of American English Consonants: evidence from behavioral, neuroimaging, and computational modeling approaches (Sponsorship jointly shared with Professor Allard Jongman, Dept. of Linguistics)

Student: Kari Dahlen
Training Period: 1998 - 2000
Degree: MS (Graduate Program: Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Sciences at Cornell University
Title of Thesis: Cortical Representation of Anxiety

Student: Yue Wang
Training Period: 1998 - 2001
Degree: Ph.D.
Institution: Cornell University
Title of Thesis: Neuroplasticity during language acquisition (Sponsorship jointly shared with Professor Allard Jongman, Department of Linguistics)

Student: Howard Berman
Training Period: 1997 - 2001
Degree: Ph.D. (Graduate Program: Pharmacology)
Institution: Weill Medical College and Graduate School of Medical Sciences at Cornell University
Title of Thesis: Cortical Representation of Treatment for Chronic Pain

Student: Arno Klein
Training Period: 1998 - 2004
Degree: Ph.D. (Graduate Program: Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Science at Cornell University
Title of Thesis: Automated brain labeling with Mindboggle (Date of Defense: May 2004)

Student: Jennifer Nunez
Training Period: 1998 - 2004
Degree: MD/Ph.D. (Graduate Program: Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Science at Cornell University
Title of Thesis: The Study of Deceptive Behavior and its' Component Processes Using fMRI (Date of Defense: September 22, 2004)

Student: Ardesheer Talati
Training Period: 1998 - 2004
Degree: Ph.D. (Graduate Program: Pharmacology)
Institution: Weill Medical College and Graduate School of Medical Science at Cornell University

Title of Thesis: Hemisphere specializations for decision making (Date of Defense: September 27, 2004)

Student: Diana Rodriguez-Moreno
Training Period: 1997 - 2005
Degree: Ph.D. (Graduate Program: Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Science at Cornell University
Title of Thesis: Large-Scale Cognitive Networks for Logical Processes (Date of Defense: May 26, 2005)

Student: Monica Hilario
Training Period: 2001 - 2005
Degree: Candidate for Ph.D. Gulbenkian Program in Biomedicine
Institution: Instituto Gulbenkian de Ciencia in Portugal
Title of Thesis: Neural Systems & Memory Strategies (Date of Defense: December 12, 2005)

Student: Donatello Arienzo
Training Period: 2005 - 2007
Degree: Ph.D.
Institution: Institute of Advanced Biomedical Technologies, University of Chieti, Italy
Title of Thesis: Touch and Expectancy Effects in Somatotopically Mapped Areas of the Medial Frontal Cortex

Students: Danushka A. Meththananda
Training Period: 2007 (Co-Sponsor)
Degree: M.A.
Institution: Department of Economics, Columbia University
Title of Thesis: Behavioral Extensions to the Topology of Fear: A Gedankenexperiment

Students: Flora A. Leventis
Training Period: 2007 (Co-Sponsor)
Degree: M.A.
Institution: Department of Economics, Columbia University
Title of Thesis: Behavioral Extensions to the Topology of Fear: A Gedankenexperiment

14c) *Current Graduate Students:*

Student: Alessia Pannese
Training Period: 2004 - Current
Degree: Candidate for Ph.D.
Institution: Columbia University
Topic of Thesis: Neural Correlates of Conscious and Unconscious Processing of Faces

Student: John Ferrera
Training Period: 2004 - Current
Degree: Candidate for Ph.D.
Institution: Queens College: Program in NeuroPsychology
Topic of Thesis: Determination of The Language-Dominant Hemisphere Using fMRI-Guided rTMS
Student: Grace Lai
Training Period: 2004 - Current
Degree: Candidate for Ph.D.
Institution: Columbia University
Topic of Project: Influence of Positive and Negative Emotion on Risk-Taking Behavior in Decision-Making

Student: Michelle Umali
Training Period: 2005 - Current
Degree: Candidate for Ph.D.
Institution: Columbia University
Topic of Project: Neurophysiological Correlates of the Effects of Emotion on Visual Attention and Visual Perception

Student: Spiro Pantazatos
Training Period: 2006 - Current
Degree: Candidate for Ph.D.
Institution: Columbia University
Topic of Project: Relating Genomics and Neurocircuitry of Stress and Anxiety

14d) Thesis Examination Committees:

Student: Nancy E. Vinton
Training Period: 1979 - 1981
Degree: M.D.
Institution: Yale University School of Medicine
Title of Thesis: Evaluation of a Rapid Test of Dark Adaptation

Student: Jacqueline Gottlieb
Training Period: 1988 - 1992
Degree: Ph.D. (Graduate Program of Neurobiology)
Institution: Yale University

Title of Thesis: Contributions of the Primate Frontal Eye Fields to the Control of Smooth Pursuit Eye Movements

Student: Paul Castella
Training Period: 1995 - 1999
Degree: Ph.D. (Graduate Program of Cell Biology)
Institution: Weill Medical College and Graduate school of Medical Sciences at Cornell University
Title of Thesis: A Functional Analysis of the Transcription Repressor Protein HES-1 in Neuronal Development

Student: Jianfeng Mei
Training Period: 1995 - 1999
Degree: Ph.D. (Graduate Program of Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Sciences at Cornell University
Title of Thesis: Pharmacological Characterization of Mouse and Rat Sigma$_1$ Receptor

Student: Jeffrey Tsai
Training Period: 1996 - 2000
Degree: Ph.D. (Graduate Program of Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Sciencesnat Cornell University
Title of Thesis: Characteristics of the Sieve Illusion and the Role of daVinci Stereopsis

Student: Steve Kalik
Training Period: 1997 - 2001
Degree: Ph.D. (Graduate Program of Neuroscience)
Institution: Weill Medical College and Graduate School of Medical Sciences at Cornell University
Title of Thesis: Effects of Saccades on Processing in the Occipitotemporal Pathway of Alert Monkeys

Student: Rebecca L. Achtman
Training Period: 1999 - 2002
Degree: Ph.D. (Department of Neurology and Neurosurgery)
Institution: McGill University
Title of Thesis: Investigation Of Shape Processing Using Psychophysics and fMRI

Student: Xian Zhang
Training Period: 2002 - 2003
Degree: Ph.D. (Department of Psychology)

Institution: Columbia University
Title of Thesis: Achromatic and Chromatic Processing In the Human Visual System-A Principal Component Analysis of the Multifocal VEP

Student: Andrew F. Teich
Training Period: 1999 – 2004
Degree: Ph.D. (Center for Neurobiology and Behavior)
Institution: College of Physicians and Surgeons, Columbia University
Title of Thesis: Fundamental Basis for the BOLD Signal

Student: Damian A. Stanley
Training Period: 1999 - 2005
Degree: Ph.D. (Center for Neural Science)
Institution: New York University
Title of Thesis: The Representation of Salient Regions, Shapes and Objects in the Human Visual System

Student: Emily R. Stern
Training Period: 1999 - 2005
Degree: Ph.D. (Graduate School for Arts & Sciences)
Institution: Columbia University
Title of Thesis: Neural Correlates Of Preparatory Attentional Control: Relationship To Behavior And Processing Of Conflict Stimuli

Student: Kristen Klemenhagen
Training Period: 2003 - 2009
Degree: Ph.D. (Graduate School for Arts & Sciences)
Institution: Columbia University
Title of Thesis: Hippocampal and Amygdalar Circuitry Involved in Contextual Fear Conditioning: Identifications of Functional Subregions of the Hippocampus in Anxious Mice and Humans.

Student: Jessica Galgano
Training Period: 2002 - 2007
Degree: Ph.D. (Graduate School for Arts & Sciences)
Institution: Columbia University / Teacher's College
Title of Thesis: Neural Correlates of Laryngeal Movement Associated With Young and Aging Voice Planning and Production: ERP Characteristics of the Voice-Related Cortical Potential

Student: Ajna Borogovac
Training Period: 2008-Current
Degree: Ph.D. (Graduate School for Arts & Sciences)

Institution: Columbia University
Title of Thesis: Novel method for superior detection of functional changes in CBF using Arterial Spin Labeling fMRI

14e) Post-Doctoral Trainees:

Trainee: Jan McVey, Ph.D. /O.D.
Training Period: 1981 - 1983
Institution: Yale University School of Medicine
Project Title: Contrast Sensitivity and Semi-Permeable Contact Lenses

Trainee: Susan Groll, Ph.D.
Training Period: 1983 - 1985
Institution: Yale University School of Medicine
Project Title: Vernier Discrimination in Human Peripheral Visual Field

Trainee: Kyoung-Min Lee, M.D., Ph.D.
Training Period: 1994 - 1998
Institution: Departments of Neurology, MSKCC and Weill Medical College at Cornell University
Project Title: Cortical Representation of the Human Eye-Movement System

Trainee: Gudrun Lange, Ph.D.
Training Period: 1996 -1998
Institution: MSKCC
Project Title: Neuropsychological Test Batteries for fMRI

Trainee: Maximilian Ruge, M.D.
Training Period: 1998 - 1999
Institution: MSKCC and Weill Medical College and Graduate School of Medical Sciences at Cornell University
Project Title: Concordance between fMRI and Intraoperative Language Mapping

Trainee: Holly Posner, M.D.
Training Period: 1999 - 2000
Institution: Department of Neurology, MSKCC
Project Title: Cortical Representation of Visual Tilt Illusions

Trainee: David Gutman, M.D.
Training Period: 2000 - 2003
Institution: Department of Psychiatry, Columbia University (Fellowship with Jack Gorman, M.D.)
Project Title: Long-Range Cortical Networks and Genetics of Fear and Anxiety

Trainee: Jonathan Shaywitz, M.D.
Training Period: 2002 - 2003
Institution: Columbia University
Project Title: fMRI of Social Phobia

Trainee: Jazmin Schwartz, Ph.D.
Training Period: 2001 - 2003
Institution: Columbia University
Project Title: Computational Models of Dynamical Interactions between Cortical Regions within a Long-Range Cognitive Network

Trainee: Kathy Kessler, Ph.D.
Training Period: 2003 - 2004
Institution: Columbia University
Project Title: fMRI and EEG Second Language Acquisition

Trainee: Irina Strigo, Ph.D.
Training Period: 2003 - 2004
Institution: Columbia University
Project Title: fMRI in the Minimally Conscious State

Trainee: Tobias Egner, Ph.D.
Training Period: 2003 - 2006
Institution: Columbia University
Project Title: fMRI, TMS, EEG and Neural Systems for Visual Perception

Trainee: Jack Grinband, Ph.D.
Training Period: 2002 - Current
Institution: Columbia University (Joint with Vince Ferrera Mahoney Center)
Project Title: Neural Correlates of Decision Making

Trainee: Xian Zhang, Ph.D.
Training Period: 2003 - Current
Institution: Columbia University (Joint with Don Hood, Psychology)
Project Title: Retinotopic Mapping: fMRI and VEP

Trainee: Diana Moreno-Rodriguez, Ph.D.
Training Period: 2005 - Current
Institution: Columbia University
Project Title: fMRI in Minimally Conscious Patients

Post-Doctoral Trainees and Fellows (Mentored):

Title: Lateralization of Visual and Verbal Hippocampal Memory Using fMRI *Source:*
PI: Angela Lignelli, M.D.,
Mentor: Joy Hirsch, Ph.D.
Date: 2003 - Current

Title: Longitudinal Analysis of Age Related Memory Decline
Source: NIMH 1K02 MD ORCDA-NIA
PI: Scott Small, MD
Mentors: Mayeux, Hirsch, Stern
Date: 04/01/00 - 03/31/05

Title: Neural Correlates of Normal/Disordered Voice Production
Source: National Research Service Award (NRSA)
PI: Jessica Galgano
Mentors: Joy Hirsch, Ph.D. and Karen Froud, Ph.D.
Period: 01/01/06 - 01/01/09

Title: Language and Neuroimaging in Mild Closed Head Injury
Source: National Research Service Award (NRSA)
PI: Angel Grice
Mentors: Joy Hirsch, Ph.D. and Karen Froud, Ph.D.
Period: 12/01/05 - 12/01/07

Title: An fMRI Study of the Brain Circuitry of Sad Emotion in Bereavement
Source: NIH K-08 Mentored Clinical Scientist Development Award
PI: Peter Freed, M.D.
Mentor: Joy Hirsch, Ph.D. and John Mann, M.D.
Period: 7/1/07 - 6/30/12

Title: fMRI in Mitochondrial Disorders of Children
Source: K12 NS01698
PI: Arthur Mandel, M.D., Ph.D.
Mentor: Joy Hirsch, Ph.D. (Joint with Dr. Darryl DeVivo)
Period: 7/1/03 - 6/30/08

14f) ***Student Trainees/Summer Students/Visiting Scientists:***

MEDICAL STUDENT RESEARCH TRAINEES:

Student	*Training Program*	*Training Period*	*Previous Institution*	*Previous Degree*	*Title Of Thesis/ Research Project*	*Current Position*
Jake Kaufman	MD	2008 - 2009	Amherst College Bryn Mawr College	B.A. Post-Bacca-laureate		Doris Duke Foundation Fellow/ Columbia University College of Physicians & Surgeons
Ellen L. Duncan	M.D./ Ph.D.	Summer 2008			Neurocircuitry and Music Perception	Columbia University College of Physicians & Surgeons
Amy L. Newhouse	M.D.	Summer 2008	Cornell University	B.S.	Neurocircuitry and Autism	Columbia University College of Physicians & Surgeons
Jennifer Cabot	MD	Summer 2005	Harvard University	B.S.	Plasticity Of Sensory Motor Function	Columbia University College of Physicians & Surgeons
Seth Gale	MD	Summer 2005	Loyola Marymount University	Master of Arts	Cognitive Control and fMRI of Stroop Tasks	Medical College of Virginia
Ryan Dockery	MD	2004 - 2005	Xavier University of Louisiana	B.S.	Attention and Early Visual Processing	Columbia University College of Physicians & Surgeons

Daniel Pereza	MD	2004 - 2005	Yale University	B.S.	Amygdala Circuitry For Emotional Processing	Doris Duke Foundation Fellow/ Columbia University College of Physicians & Surgeons
Woody McClelland	MD	2004 - 2005	Harvard University	B.S.	Facial Emotion Recognition After Curative Nondominant Temporal Lobectomy In Patients With Mesial Temporal Sclerosis	Columbia University College of Physicians & Surgeons
*Stephanie Howard	MD	2003 - 2004	Yale University	B.S.	Short Term Memory and Dyslexia	Doris Duke Foundation Fellow/ Yale School of Medicine
Kathryn Yung	MD	2003 - 2004	Harvard University	B.A.	fMRI of Auditory VS. Visual Naming	Medical Student Columbia University College of Physicians & Surgeons
Jennifer Koo	MD	2003 - 2004	Harvard University	B.A.	Mapping of Cognitive Decline	Medical Student Columbia University College of Physicians & Surgeons

* Winner, CUMC Dean's Day Research Award, Selected to represent CUMC at National Doris Duke Foundation Meeting, CA**,** June 2004.

M.D. AND PH.D. GRADUATE STUDENT LAB ROTATIONS:

Student	*Training Level*	*Rotation Period*	*Previous Institution*	*Previous Degree*	*Title Of Thesis / Research Project*	*Current Position*
Diana Moga	M.D./ PhD.	Summer 2007	Mount Sinai	B.A.	TBD	Resident (Psychiatry), Columbia University
Marrianna Schneyder-man	M.D.	Summer 2006	MIT	B.S.	TBD	M.D. Student
Ted Yanagihara	M.D./ Ph.D.	Summer 2006		B.S.	TBD	M.D./Ph.D. Program
Spiro Pantazatos	Ph.D.	Spring 2006		B.S.	Integration of Genomics & fMRI Patterns of Cortical Activity	Graduate Student Biological Sciences
Michelle Umali	Ph.D.	Spring 2005		B.S.	Neuro-Physiologcal Correlates of the Effects of Emotion on Visual Attention & Visual Perception	Graduate Student Biological Sciences
Grace Lai	Ph.D.	Fall 2004 Spring 2005	Cornell University	B.S.	Neurocircuitry For Image Segmentation of Ambiguous Figures	Graduate Student Biological Sciences
Alessia Pannese	Ph.D.	Summer 2004	Columbia University	B.S. D.V.M.	Neuroplasticity of Motor Function of The Non-Dominant Hand	Graduate Student Biological Sciences

Adam Bograd	M.D.	Summer 2004	Columbia University	B.S.	Studies of Image Segmentation: Ambiguous Figures	Medical Student, Columbia University
Yuuko Uchikoshi	Ph.D.	Summer 2003	University of Sacred Heart, Tokyo George-Town	B.A. M.S.	Bilingual Study of Verbs VS. Nouns	Graduate Student Harvard School of Education
Yiping (Albin) Zhang	M.D.	Summer 2003	Columbia University	B.S.	Studies of Image Segmentation & Eye Movement: Ambiguous Figures	Medical Student Columbia University
Jason Poff	M.D.	Summer 2003	MIT	B.S	Prosody as a Language Element	Medical Student Columbia University
Eunice Hahn	M.D.	Summer 2003	Mount Sinai	B.A.	Amygdala Response to Direct Versus Indirect Eye Gaze in Social Anxiety Disorder	Medical Student Mt. Sinai School of Medicine
John Ferrera	Ph.D.	Summer 2003	Queens College	B.S.	Retinotopic Mapping	Queens College Neuro-Psychology
Christopher Damman	M.D.	Summer 2003	Wesleyan University	B.A. M.A.	Biological Markers During fMRI	Medical Student Columbia University
Amy Chang	M.D.	Summer 2001 MSKCC	Yale University	BA	Swallowing Dysfunction	Medical Student at Albert Einstein. (N.C.I.)
Andrew Freeman	M.D.	Summer 2000 MSKCC	Cornell University	BA	Analysis Methods: Coincidence & Registration of Image	Medical Student at Buffalo University School of

					Segmentation Studies	Medicine & Biomedical Science
Marc Dinkin	M.D.	Summer 1999 MSKCC	Cornell University	BA	Cortical Representation Of Music Learning	Resident Cornell
Steve Kleiner	M.D.	Summer 1999 MSKCC	Cornell Med	BA	Cortical Networks for Hand-Eye Coordination	Resident Cornell
Amy Scheffler	M.D.	Summer 1999 MSKCC	Cornell Med	BA	Cortical Maps for Sedated Infants	Medical Student Cornell
Andy Teich	M.D.	Summer 1999 MSKCC	Cornell Med	BA	Cortical Networks for Human Logic	Graduate Student, Neuro-Science Columbia
Hasit Mehta	M.D.	Summer 1998 MSKCC	University of Rochester	B.S./B.A.	Core Cortical Networks Involved In Probability Estimation	Medical Intern
Meg Porter	M.D.	1997 Summer MSKCC	Yale Columbia University	BS MD	Cortical Systems Associated with Language and Music Perception	Resident
Ross Silver	M.D.	1997 Summer MSKCC	Cornell	BS	Cortical Structures Involved in Working Memory	Intern University of Pittsburgh
Valerio Luccio	Ph.D.	1997	NYU	BS	Registration of Volume T1 & T2* Weighted Images with Functional Information	N/A

Richard Do	M.D./ Ph.D.	1997 Rotation MSKCC	Cornell	BS	Is Medical School Vocabulary a Second Language?	Med Student Cornell
Michelle Imber	Ph.D. Neuro-Science NYU	1997, 1998 Summers MSKCC	Brown NYU	BS	Visual Processing of Illusory Contours and Street Figures	Postdoctoral
Sam Amirfar	M.D.	1996 Summer MSKCC	NYU NYU	BS MD	Representation of Imagined Visual & Auditory Stimulation	NYU Resident
Rebecca Fenichel	M.D.	1996 Summer MSKCC	Yale	BS	The Representation of Human Visual Stereopsis	NYU Medical School Med Student
Dilip Nath	M.D.	1996 Summer MSKCC	NYU NYU	BS MD	Synergistic Responses Between Visual and Auditory Stimulation	Resident Surgery
Rafael Valencia	M.D.	1996 Summer MSKCC	Columbia CUMC	BS MD	Simulation of Visual Scotomas and Variations in Primary Visual Cortex Activity	Resident
Robert DeBellis	Ph.D. Neurosci Rotation CUGSMS	1996 MSKCC	Cornell	BS	PCA Analyses of fMRI Data	N/A
Pari Phanharipa-nde	M.D.	1995 Summer MSKCC	Cornell	BS	Retinotopic Mapping on Primary Visual Cortex	Resident

Yale Popowich	M.D.	1995 Summer MSKCC	Pennsylvania Columbia	BS	Cortical Representation of Internal Speech	Resident
Gershon Rothchild	Ph.D. Neuro. Rotation CUGSMS	1995 MSKCC	Columbia	BS	Survey the Neuroimaging Of Attention	Postdoctoral Fellow
Danny Kim	M.D.	Summer 1994	Pennsylvania	BS	3-D Representation of Motor Functions in Human Brain	Medical Student University of Pennsylvania
John Olyarchuk	M.D. (CUMC)	1994, 1995 MSKCC	Cornell	BS 1992	Development of Graphics Systems for Brain Mapping	Resident, Internal Medicine
Tom White	M.D./ Ph.D.	1994	Oberlin	BS 1990	Development of Analysis Procedures for fMRI	NYS PI
Jody Courtney	M.D.	1994	UC San Diego	BS 1993	Applications of PV Wave to MRI Analyses	
Lisa A. Grohskopf	M.D.	1989 - 1993 Yale	Swarthmore	BS 1989	Random Dot Displacement Discrimination is Influenced by Dot Array Shape	NIH

MEDICAL STUDENT FIRST YEAR CLERKSHIP:

Student	***Current Training Program***	***Training Period***	***Columbia Faculty***	***Clerkship Goal***
Aderinmola Stephanie Adewunmi	CUMC	Spring / Summer 2005	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning

Jeannie Chen	CUMC	Fall 2005	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning
Marrianna Schneyderman	CUMC	Spring 2006	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning
Trevor Scott	CUMC	Fall 2006	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning
Renee Saenger	CUMC	Spring 2007	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning
Ellen Dabela	CUMC	Fall 2007	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning
Joseph Mayer	CUMC	Spring 2008	Joy Hirsch	Patient Contact During Mapping For Neurosurgical Planning

GRADUATE STUDENT QUALIFYING - EXAM PROJECTS (PSYCHOLOGY):

Student	***Current Training Program***	***Training Period***	***Columbia Faculty***	***Title Of Research Project***
Tammy Moscrip	Ph.D.	Spring / Summer 2004	Herb Terrace Joy Hirsch	Neurocircuitry of Functions Related To Computations and Numerosity
Christopher Summerfield	Ph.D.	Fall / Summer 2004 Spring 2005	Jennifer Mangels Joy Hirsch	Faces, Places and Certainty of Judgments

GRADUATE STUDIES INDEPENDENT RESEARCH:

Student	***Current Training***	***Training Period***	***Columbia Faculty***	***Topic Of Research Project***

	Program			
Jessica Galgano	Teachers College Ph.D.	Spring 2005	Joy Hirsch	Effects of Morphological Complexity and Lexicality on Visual Word Recognition
Jon Bardin	Cornell University M.S.	Summer 2007 Fall 2007	Joy Hirsch	Neuroeconomics and Decision Sciences
Elliott Ash	Columbia University School of Law	Summer 2008	Joy Hirsch	Law, Neurobiology and Behavior

UNDERGRADUATE HONOR STUDENTS:

Student	***Current Training Program***	***Training Period***	***Columbia Faculty***	***Topic Of Research Project***
Chris Kelly	B.S.	Fall 2004 Spring 2005, 2006	Joy Hirsch	Plasticity in the Human Auditory System
Tara Patterson	B.S.	Fall 2004 Spring 2005, 2006	Joy Hirsch	Neurocircuitry of Anxiety

UNDERGRADUATE INDEPENDENT STUDY:

Student	***Current Training Program***	***Training Period***	***Columbia Faculty***	***Title Of Research Project***
Kelly Remole (Psychology 3950)	B.S.	Spring 2004	Joy Hirsch	Language Switching in Early and Late Acquisition Bilinguals
Maria Michael (Psychology 3950)	B.S.	Fall 2004	Joy Hirsch	Topic: fMRI Investigations of Human Olfaction

Diana Dakhlallah	B.S.	Fall 2005	Joy Hirsch/Don Hood	Early Vision: Adaptation
Ruth Poltorak	B.S.	Fall 2005 Spring 2006 Summer 2006 Fall 2006	Joy Hirsch	Neurocircuity of Second Language Acquisition
Shira Levy	B.S.	Spring 2006 Summer 2006 Fall 2006	Joy Hirsch	Neurolaw
Oren Brecher	B.S.	Spring 2009	Joy Hirsch	Supplementary Motor Area and inferior Parietal Connectivity in Autism Investigated using Diffusion Tensor Imaging

RESIDENT RESEARCH ROTATIONS 2005 - 2006:

Student	*Current Training Program*	*Training Period*	*Columbia Faculty*	*Topic Of Research Project*
Sonia Bobra	McGraw Medical Center of Northwestern University (Evanston) - Internal Medicine Program	Spring 2006	Joy Hirsch	TBD
Vijay Viswanathan, M.D.	Diagnostic Radiology Residency - Columbia University/Harlem Hospital	Fall 2005 Spring 2006	Joy Hirsch	Cortical Reorganization Following Intradigital Tendon Transfer

UNDERGRADUATE STUDENT INTERNS:

Student	*Training Level*	*Training Period*	*Institution*	*Research Project*	*Current Position*

	Level	*Period*			
Elliott Huang	B.S.	Summer 2009	Columbia University	A Diagnostic Tool for Autism	Undergraduate
Jenill Briones	B.S.	Summer 2009	Hunter College	Behavioral Measures of Autism	Undergraduate
Sandhya Rawal	B.S.	Summer 2009	MIT	Cognitive Control Mechanisms	Undergraduate
Emily Mandel	B.S.	Summer 2009	Brandeis University	Image Analysis of Passive Listening	Undergraduate
Masood Manoochehri	B.S.	Summer 2009	Columbia Unveristy		Undergraduate
Elizabeth R. Allocco	B.S.	Spring/ Summer 2008	Columbia University	Cognitive Control in Perceptual Decisions	Undergraduate
Oren Brecher	B.S.	Summer 2008	Columbia Uniersity	Perceptual Learning	SURF Program
Michelle Bubnik	B.S.	Summer 2008	Hunter College	DTI of Impulse Decisions	SPURS Program
Meghan Galligan	B.S.	Summer 2008	Harvard University	DTI and Seizure Disorders	Undergraduate
Yaniris M. Gomez		Spring 2008	Columbia University	Music Perception	SURF Program
Jennifer Rogal		Summer 2007	Emory University	Computational Methods	Undergraduate
Lauren Levy		Summer 2007	Barnard College	Perceptual Learning	Undergraduate

Yasmine Daniels		Summer 2007	Hunter University		Undergraduate
Rory Donelly		Summer 2007	Columbia University	Fear Conditioning / Safety	Undergraduate
Brooke Tortorella	B.A.	Summer 2007	William & Mary College	Risk Taking Under Situations Under Varying Controllability	Undergraduate
Julia Neuberg	B.A.	Summer 2006	Skidmore College	TBD	Undergraduate
Taylor Joerger	B.S.	Summer 2006	Columbia University	TBD	Undergraduate
Shira Levy	B.S.	Summer 2006	Columbia University	Neurolaw	Undergraduate
Scott McKinney	B.A.	Summer 2006	Harvard University	TBD	Undergraduate
Elizabeth Rodriguez	B.A.	Summer 2006	Hunter College	TBD	Summer Research Program For Students From Under-Represented Groups
Diana Dakhlallah	B.A.	Summer 2005	Barnard College	Early Vision: Adaptation	Undergraduate
Jiatao Wang	B.A.	Summer 2005	Columbia University	Early Vision: Adaptation	Undergraduate
Jamie Schwartz	B.A.	Summer 2005	Columbia University	Visual Awareness & Binding	Undergraduate
Alemji Taku	B.S.	Summer 2005	Rollins College	Desensitization To Noxious Visual Stimuli	Summer Research Program For Students From Under-Represented

					Groups
Tara Patterson	B.A.	Summer 2005	Columbia University	Amygdala & Hippocampus	SURF/ Columbia University Undergraduate
Lori Elwick	B.A.	Summer 2005	Hunter College	Desensitization	Summer Research Program for Students from Under-Represented Groups
Amy Barth	B.A.	Summer 2005	University of California, San Diego	Memory	Undergraduate
Azra Akin	B.A.	Summer 2004	Halic University, Istanbul	Cognitive Control: Stroop Paradigms	Undergraduate
Ferhina Ali	B.A.	Summer 2004	SUNY Rochester	Cognitive Decline Wechsler & fMRI	Undergraduate
Chris Kelly	B.A.	Summer 2004	Columbia University	Retinotopic Mapping & Contrast/ Response Functions	Undergraduate
Kevin Moradivafa	B.A.	Summer 2004	Columbia University	Retinotopic Mapping & Contrast/ Response Functions	Undergraduate
Suzanne Palmer	B.A.	Summer 2004	Hunter College	Faces VS. Hermites In Fusiform Gyrus	Summer Research Program For Students From Under-Represented Groups
Zichuan Tang	B.A.	Summer 2004	Columbia University	Retinotopic Mapping & Contrast/ Response Functions	Undergraduate
Jeanette Wicklegren	B.A.	Summer 2004	Harvard University	Faces VS. Hermites In Fusiform Gyrus	Undergraduate

Neda Sedora	B.S.	Summer 2004	University of Puerto Rico	Separation of L1 And L2 Systems In Late Bilingual Subjects	Summer Research Program For Students From Under-Represented Groups
Grace Lai	B.A.	Summer 2003	Cornell University	Cortical Systems of Ambiguous Figures	Undergraduate
Sandra Rindler	B.A.	Summer 2003	MIT	Cortical Systems & Perception of Faces	Undergraduate
Phoebe Stone	B.A.	Summer 2003	Amherst College	Registration of fMRI & TMS Procedures	Undergraduate
Christopher Graham	B.A.	Summer 2003	Pomona College	Recording of Eye Movements & Skin Conductants	Undergraduate
David Khalil	B.S.	Summer 2002	Princeton University	Savant-Specific Systems	Undergraduate
Kathy Chuy	B.S.	Summer 2002	Columbia University	fMRI Investigation of Depression	Undergraduate
Peter Shin	B.S.	Summer 2002	Columbia University	fMRI Imaging of the Meditative State	Undergraduate
Ambimbola Pratt	B.S.	Summer 2001, 2002	MSKCC Columbia University	Cortical Substrates For Imagery	Columbia University Medical Student (Gateways To Science Program For Under Represented Minorities, Kluge Fellowship, CU)
Bridget Mueller	B.S.	Summer 2001 MSKCC	Brown University	Cortical Substrates For Imagery	Undergraduate

Melissa Sy	B.S.	Summer 2000 MSKCC	Barnard College	Computation of fMRI Data	Undergraduate Student
Sandra y Castejon	B.A.	Summer 1999 MSKCC	Yale College	Cortical Representation of a Visual Narrative	Yale Pre-Med
Mike Geary	B.A.	Summer 1998 MSKCC	Cornell University	Core Cortical Networks Involved In Probability Estimation	Undergraduate
Claude Jarrett	B.S.	Summer 1998 MSKCC	Xavier University	Cortical Representation of Probabilities	Gateways Program Xavier - Junior (Gateways To Science Program For Under Represented Minorities)
Kimberly Dokovna	B.S.	1997 Summer MSKCC	Brandeis	The Cortical Representation of Familial Faces	Undergraduate
Tova Johnson	B.S.	1996, 1997 Summer MSKCC	Oregon State University	A Multi Model Technique To Isolate A Core Language Network	Student Oregon State University Emory Med. (Gateways To Science Program For Under Represented Minorities)
Sofia Bentancourt	B.S.	1994 Summer MSKCC	Cornell	The Effect of Visual Attention on Primary Visual Cortex Activity	Undergraduate Cornell (Pre-Med) (Gateways To Science Program For Under Represented Minorities)
Michael Kramer	B.S.	1994 MSKCC	Hunter (Honors Thesis)	A Comparison of Ipsilateral & Contralateral Hand Motor Activity In Primary Motor Cortex	Graduate Student University of Pennsylvania

Hijong Yu	B.S.	1994 MSKCC	Hunter (Honors Thesis)	A Comparison of Actual & Imagined Motor Activity In Primary Motor Cortex	Graduate Student University of Michigan

HIGH SCHOOL SCIENCE STUDENT TRAINEES / SCIENCE FAIR COMPETITION:

Student	***Training Level***	***Training Period***	***Institution***	***Research Project***	***Current Position***
Francesca Michel	Bronx High School of Science	2009 Summer		TBD	
Steve Yoonchul Lee	Bergen County Academics	2009 Summer		TBD	
Alina Lesnovskaya	Ossining High School	2009 Summer		TBD	
Charlotte Kleiman	Ossining High School	2009 Summer		TBD	
Heewoo Kim	Academy for the Advancement Science and Techology (AAST) Bergen County Academics	2009 Summer		TBD	
Eric Gold	Oceanside High School	2009 Summer		Temporal duration of Cognitive Control Mechanisms	
Charles Choi	Stuyvesant High School	2008 Summer	Intel Science Semifinalist	Auditory sensitivity	

Melody Bates	Sleepy Hallow High School	2008 Summer		Auditory Processes	
Melanie Gao	Brearly High School	2008 Summer		Auditory Processes	
Eric Gold	Oceanside High School	2008 Summer		Decision-making	
Ariel Karten	Yeshiva University High School for Boys	2008 Summer		Ambiguous figures	
Nupur Nanda	American Embassy School, New Delhi	2008 Summer		Neurocircuitry of deception	
Anderson Antoine	Science Skills Center High School	2007 Summer	Harlem Children Society	Brain Mapping of The Sensory, Motor & Mirror Systems	Junior, Science Skills Center High School/Inner City program
Jamal Thorne	Science Skills Center High School	2007 Summer	Harlem Children Society	Brain Mapping of The Sensory, Motor & Mirror Systems	Junior, Science Skills Center High School/Inner City program
Michael Brooks	Ethical Culture Fieldston School	2007 Summer	Children's Arts & Science Workshops (CASW)	Systems Administration Intern	Sophomore, Ethical Culture Fieldston School
Nupur Nanda	American Embassy School (New Delhi)	2007, 2008 Summer	Intel Science Semifinalist	Neural Patterns For Lying	
Ben Mueller	Great Neck North HS	2007 Summer	Intel Science Competition	Manipulation / Parental Decision - Making	Yale undergrad

Judy Savitsky	Bergen Academies: Science & Tech.	2007 Summer	Intel Science Competition	Reaction Time as an Indicator of Conflict	Senior, Bergen Technical Academy
Sophia Porrino	Bergen Technical Academy	2006 - 2007	New Jersey Regional Science Fair, 1st Place Winner	FFA, PPA, Unicorns & Other Mythical Creatures: Functional Specificity in the Human Brain	Senior, Bergen Technical Academy
Zach Lorsch	Oceanside High School	2008, 2007, 2006 Summer	NY Science and Engineering Fair; 3rd place	The Effect of Allotted Response Time on The Classification of Emotional Stimuli.	Cornell undergrad
Caitlyn Lia	Ossining High School	2006 Summer	Intel Science Competition	TBD	Junior, Ossining High School
Rebecca Kilberg	Hunter College High School	2006, 2005 Summer	Intel Science Competition	The Role of Gender & Age In Recognition Of Emotional Expressions	Senior, Hunter College High School
Xiao Ting Tan	Manhattan International High School	2005 Summer	Intel Science Competition	TBD	Junior, Manhattan International School
Steve Glinert		2005 Summer	Intel Science Competition	Mathematical Computation With Verbal & Visual Interference	George Washington University
Justin Goldberg	Oceanside High School	2006, 2005 Summer	NY Science and Engineering Fair; 3rd Place	An fMRI Study of The Explicit Learning Versus Implicit Acquisition of Novel Foreign Words	Senior, Oceanside High School
Oren Brecher	Suffern High School	2006, 2005 Summer	Intel Science Competition, Finalist	Neural Plasticity Along The Motor Pathway Accounts For Perceptual Learning	Senior, Suffern High School

Elizabeth Allocco	Burnt Hills High School	2006, 2005 Summer	Intel Science Competition, Semifinalist	Self Awareness	Senior, Burnt Hills High School
Ferdinand Chan	Stuyvesant High School	2004 Summer	Intel Science Competition	Ambiguous Face/ Vase Fig & Fusiform Gyrus Activity: Perception VS. Visual Sensation	Stuyvesant High School
Allison Kline	Bronx Science	2004 Summer	Intel Science Competition	Is Facial Expression Coded Differently N R1L Fusiform Gyrus	Bronx Science High School Intel 2005 Semifinalist
Maggie Delano	Ossining High School	2005 Summer 2004 Summer	Intel Science Competition	Left Handed Subjects: Difference In Stroop Performance Between R & L Hemisphere Dominance	Ossining High School, WESEF Finalist, Intel ISEF, National JSHS
Arif Patel	High Tech High School	2003 Summer 2004 Summer	American Chemical Society Fellowship	Cortical Influence on Perceptual Grouping of Ambiguous Figures	Senior High Tech High School
Prathyusha Yeteru	St. Francis Prep	2002 Summer 2003 Summer	Student Intern St. Francis Preparatory Science Research Program	Auditory and Visual Cues for Human Language	Senior St. Francis Preparatory School
Arielle Rodman	Brearly School	2002 Summer	Brearly School Science Program	The Mc Collough Effect: Evidence From fMRI	Brown University
Henri Benaim	Lawrence High School	2001	Intel Science Competition	Connection Between Tickle & Humor	Yale University
David Kahlil	Great Neck North High School	2000 - 2001 / 2002	Intel Science Competition	The Identific. of The Multiple Human Brain Areas Associated With Two Perceptions of	Top 10 Winner in Intel Science Competition Princeton University

				Ambiguous Figures Using fMRI.	Undergraduate
Jennifer Kim	Byram Hills High School	1998 - 2000	Intel Science Competition	Cortical Networks for Opinions and Facts	Finalist: Intel Competition Brown University
Ran Xu	Stuyvesant High School	1996 - 1997	Westinghouse Science Competition	Neuroimaging of Human Brain During Real-Time Video Game Playing: Differences Between Doom and Tetris	Chicago University Semifinalist: Westinghouse Science Competition
Renee DiResta	High School	1996, 1997	Westinghouse Science Competition	Cortical Representation Activated During the Playing of a Musical Instrument	Syracuse University
Jenny Kim	Hunter High School	1995 Summer	New York Academy of Science	Cortical Representation of Imagined Movement	New York University Law School
Amy Lee	Hunter High School	1995 Summer	New York Academy of Science	Cortical Representations of Multiple Chinese Dialects	New York University

VISITING SCIENTISTS:

Scientist	***Dates***	***Home Institution***	***Research Project***	***Current Position***
Rosaria Polito, M.D.	June - Oct. 2005	Catholic University of Sacred Heart	TMS/fMRI For Language Mapping	Resident in Radiology, School of Physicians and Surgeon, Catholic University of Sacred Heart
Donatello Arienzo	May 2005 - Nov. 2006	University of Chieti	Somatotopy In Secondary Cortices	Ph.D. student at the Institute of Advanced Biomedical Technologies, University of Chieti

Daniel de Morales Branco, M.D.	June 30, 2004 - 2005	School of Medicine Pontifical University of Rio Grande do Sul, Brazil	Seizure Localization Using fMRI	Ph.D. student in Neuroscience, School of Medicine Pontifical University of Rio Grande du Sul, Brazil
Yue Wang, Ph.D.	May - July 2004	Simon Fraser University, British Columbia	Second Language Speech Learning	Assistant Professor, Simon Fraser University, Vancouver, BC
Mathilde Schnizer, M.D.	Sept - Dec. 2003	Landesnervenklinik Wagner-Jauregg, Linz, Germany	Cognitive Decline, Wechsler and fMRI	Neurosurgeon, Landesnervenklinik Wagner-Jauregg, Linz, Germany
Harry Schneider, M.D.	June 2003 - Present	Private Practice, New York	The Effect Of Motivation On Second Language Acquisition	Private Practice, New York Graduate Student
Michael Barry, Ph.D.	Jan. - Aug. 2003	St. John's University, Queens New York	fMRI of Olfactory Stimulation	Associate Professor, St. John's University, Queens, New York
Bharathi Batchu, M.D.	Feb. - Aug. 2003	Bangalore Medical College, Bangalore, India	Neurosurgical Planning	Radiology Resident
Savvas Andronikou, M.D., Ph.D. (Derek Harwood-Nash Scholar, Radiology Society of North America)	April - May 2007	University of Stellenbosch, Tygerberg, South Africa	DTI Correlation of Corpus Callosum Thickness & Fiber Track Abnormalities in Pediatric PVL	Chair and Professor of Radiology, University of Stellenbosch, Tygerberg Hospital

15) OTHER PROFESSIONAL ACTIVITIES (SELECTED):

Consultative:

Name	*Location*	*Division*	*Dates*

Eyeforpharma - CNS Drugs	Philadelphia, PA	Member, Advisory Committee	2007-Current
The Wellcome Trust	London, UK	Member, Academic Advisory Committee	2006-Current
American Federation for Aging Research	New York, NY	Organizing Committee, Imaging & the Aging Brain Conference/ NY Academy of Sciences	2006
NIH Study Section	Washington, DC	Sensorimotor Integration NINDS - Cognition and Imaging Special Emphasis Panel AED (Anterior Eye Disease)	2002 - 2005 2006 2006
Human Brain Mapping Organization	New York, NY	Local Organizing Committee (Annual International Meeting)	2002 - 2003
fMRI CPT Code Support Group	USA	N/A	2002 - 2005
Journal of Clinical Investigation	New York, NY	Editorial Board	2001 - Current
NY Hall of Science	New York, NY	Advisory Board	1999 - Current
Interzeag A.G.	Zurich, Switzerland	Consult: Medical Devices	1982 - 1986
CooperVision	Irvine, CA	Consult: Medical Devices	1985 - 1987
Bio-Rad Laboratories	Hercules, CA	Consult: Medical Devices	1985 - 1987
Randwal Instrument Company	Sturbridge, MA	Consult: Medical Devices	1987 - 1990

16) PUBLICATIONS (ASTERISK INDICATES SENIOR AUTHORSHIP):

A. *Original, Peer-Reviewed Articles:*

*1. Murch, G. and Hirsch, J. The McCullough effect created by complementary afterimages. *Am. J. Psych.*, 1972, 85, 241-247.

*2. Hirsch, J. and Murch, G. Variations in hue of a contouring-contingent after-effect due to color adaptation during inspection of the stimulus patterns. *Perception and Psychophysics*, 1972, 11, 406-408.

*3. Hirsch, J., Schneider, B. and Vitiello, M. The effects of adaptation to square wave gratings as a function of grating orientation. *Perception and Psychophysics*, 1974, 15, 475-478.

*4. Hirsch, J., Hylton, R. and Graham, N. Simultaneous recognition of two spatial- frequency components. *Vision Research*, 1982, 22, 365-375.

5. Poynter, H.L., Schor, C., Haynes, H. and Hirsch, J. Oculomotor functions in reading disability. *Amer. J. Optometry & Physiol. Optics*, 1982, 59, 116-127.

*6. Hirsch, J. and Hylton, R. Limits of spatial-frequency discrimination as evidence of neural interpolation. *J. Opt. Soc. Am.*, 1982, 72, 1367-1374.

*7. Hirsch, J. Falcon visual sensitivity to grating contrast. *Nature*, 1982, 300, 57-58.

*8. Hirsch, J. Falcon visual resolution is equal to human. *Nature*, 1983, 303, 729-730.

*9. Hirsch, J. and Hylton, R. Quality of the primate photoreceptor lattice and limits of spatial vision. *Vision Research*, 1984, 24, 347-355.

*10. Hirsch, J.and Hylton, R. Orientation dependence of visual hyperacuity contains components with hexagonal symmetry. *J. Opt. Soc. Am.*, 1984, 1, 300-308.

*11. Hirsch, J. and Hylton, R. Spatial frequency discrimination at low frequencies: evidence for position quantization by receptive fields. *J. Opt. Soc. Am. A.*, 1985, 2, 128-135.

*12. Hirsch, J. Line-separation discrimination curve in the human fovea: smooth or segmented: A reply to Gerald Westheimer. *J. Opt. Soc. Am. A.*, 1985, 2, 477-478.

*13. Groll, S.L. and Hirsch, J. Two-dot vernier discrimination within 2.0 degrees of retinal fovea. *J. Opt. Soc. Am. A.*, 1987, 4, 1535-1542.

*14. Hirsch, J. and Miller, Wm. H. Does cone positional disorder limit near-foveal acuity? *J. Opt. Soc. Am. A.*, 1987, 4, 1481-1492.

*15. Jankelovits, E.R.; Lichtenstein, S.J.; Groll, S.L.; Remijan, P.W.; and Hirsch, J. Assessment of retinal function in cataract patients using laser interferometry to measure contrast sensitivity. *Applied Optics*, 1988, 27, 1057-1063.

*16. Gollamudi, S.R.; Liao, P.M. and Hirsch, J. Evaluation of corrected loss variance as a field index: Part II. Corrected loss variance in conjunction with mean defect can identify stages of glaucoma. *Ophthalmologica*, 1988, 197, 144-150.

*17. Liao, P.M.; Gollamudi, S.R. and Hirsch, J. Evaluation of corrected loss variance as a field index: Part I. Corrected loss variance can discriminate between glaucoma suspect patients with no loss of visual sensitivity and control observers. *Ophthalmologica*, 1988 & 197, 136-143.

*18. Samy, C.N. and Hirsch, J. Differences between human and monkey retinal sampling mosaics suggest a strategy that enhances human visual sensitivity and resolution. *Visual Neuroscience*, 1989, 3, 281-285.

*19. Hirsch, J. and Curcio, C.A. The spatial resolution capacity of human foveal retina. *Vision Research*, 1989, 29, 1095-1101.

*20. Sims, L.M., Stoessel, K., Thompson, J.T. and Hirsch, J. An assessment of visual field changes before and after focal photocoagulation for clinically significant diabetic macular edema. *Ophthalmologica*, 1990, 200, 133-141.

21. Costaridou, L., Stefanou, S., Hirsch, J. and Orphanoudakis, S. Image reconstructions based on the human and monkey cone mosaics: Cone-positions-Known and cone-positions-ignored models of retinocortical mapping. *Visual Communication and Image Representation*, 1990, 1(2), 137-152.

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*23. Morris, M., Klett, Z., Gieser, S.C., Couch, J.M. and Hirsch, J. Assessment of potential contrast sensitivity. Part I: Preoperative prediction of contrast sensitivity following IOL implantation. *J. Cataract & Refract. Surg.*, 1991, 17, 37-44.

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26. Meyer, K.L., Kim, K., Li, T., Tulipano, P.K., Lee, K-M., DeLaPaz, R., Hirsch, J., Ballon, D. Sensitivity-enhanced Echo-planar MRI at 1.5T using a 5x5 Mesh Dome Resonator. *Magnetic Resonance Imaging*, 1996, 36, 606-612.

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*49. Talati, A., Valero-Cuevas,F.J., Hirsch, J., Visual and Tactile Guidance of Dexterous Manipulation: an fMRI Study, *Perceptual and Motor Skills*, 2005, 101: 317-334.

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*51. Egner, T., Hirsch, J., Cognitive control mechanisms resolve conflict through cortical amplification of Task-Relevant information, *Nature Neuroscience*, 8 (12), 1784-1790, 2005.

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intradigital tendon transfer, *NeuroReport*, Vol. 17, 16: 1669-1673, 2006.

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administration on *in vivo* regional neural activity in response to visual food stimuli, *Journal of Clinical Investigation,* 118(7): 2583-2591, 2008.

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E. ***Papers Submitted and In Peer Review:***

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