

**Wake Forest University School of Medicine
Curriculum Vitae**

NAME: Joseph A. Maldjian, M.D.

CURRENT ACADEMIC TITLE: Professor of Radiologic Sciences

CURRENT ADMINISTRATIVE TITLE: Section Chief, Neuroradiology
Director, Advanced Neuroscience Imaging Research Lab (ANSIR)

ADDRESS:

Business: Department of Radiology
Division of Radiologic Sciences
Wake Forest University School of Medicine
Medical Center Boulevard
Winston-Salem, North Carolina 27157-1088
(336) 716-2815

EDUCATION:

College:	Princeton University Princeton, New Jersey BA in Biochemistry	1980-1984
Honors and Awards:	Magna Cum Laude	1984
Thesis Title:	SV-40 72 base pair repeat: Application to the cloning of varicella zoster virus proteins	
Medical School:	UMDNJ-New Jersey Medical School Newark, New Jersey Doctor of Medicine	1984-1988

POSTDOCTORAL TRAINING:

Internship:	Internal Medicine Saint Barnabas Medical Center Livingston, New Jersey	7/88-6/89
Residency:	Diagnostic Radiology Chief Resident Mount Sinai Medical Center New York, New York	7/89-6/93 1992-1993
Fellowship:	Neuroradiology Department of Radiology Hospital of the University of Pennsylvania Philadelphia, Pennsylvania	7/93-6/95

PROFESSIONAL LICENSURE:

North Carolina (#2000-01406)	10/19/00
New York (#17882-1)	
New Jersey (#MA62104)	
Pennsylvania (MD 0499 43-L)	

SPECIALTY CERTIFICATION:

American Board of Radiology	1993
Certificate of Added Qualification, Neuroradiology	1995
MOC, Neuroradiology, ABR	2005

EMPLOYMENT:

Academic Experience:	Professor of Radiology Wake Forest University School of Medicine Winston-Salem, North Carolina	07/1/05- present
	Associate Professor of Radiology Wake Forest University School of Medicine Winston-Salem, North Carolina	12/1/00-07/1/05
	Associate in Biomedical Engineering Wake Forest University School of Medicine Winston-Salem, North Carolina	12/1/00-present
	Assistant Professor of Radiology University of Pennsylvania Medical Center Department of Radiology Philadelphia, Pennsylvania	7/1/97-11/30/00
	Assistant Professor of Clinical Radiology Department of Radiology UMDNJ-New Jersey Medical School Newark, New Jersey	7/95-6/97
	Instructor, Clinical Radiology Department of Radiology University of Pennsylvania Medical Center Philadelphia, Pennsylvania	7/93-6/95

OTHER PROFESSIONAL APPOINTMENTS AND INSTITUTIONAL SERVICE:

Editorial Work:	American Journal of Neuroradiology	1998-present
	American Journal of Roentgenology	1998-present
	Neuroimage	2001-present
	Neurology	2001-present
	JCAT	2001-present
	Journal of Neuroimaging	2003-present

Hospital Affiliations:

Director, Functional Imaging Laboratory UMDNJ-New Jersey Medical School	7/95-6/97
Attending Staff Department of Radiology VA Hospital East Orange, New Jersey	7/95-6/97
Attending Staff Department of Radiology Bergen Pines Hospital	9/96-6/97
Assistant Director Neuroradiology Fellowship Program Hospital of the University of Pennsylvania	9/97-11/00
Physician Liaison Hospital of the University of Pennsylvania	7/97-11/00
Director Advanced Neuroscience Imaging Research Lab (ANSIR) Wake Forest University School of Medicine www.fmri.wfubmc.edu	12/1/00-present
Chairman Magnetic Resonance Imaging Committee Center For Biomolecular Imaging Wake Forest University School of Medicine	09/2004-7/2007
Chairman MRI Users Group Committee Center for Biomolecular Imaging Wake Forest University School of Medicine	09/2004-7/2007

Consultancies, Professional Appointments (National):

Grant Review Committee National Institutes of Health SBIR/STTR Special Study Section 8	1998-2001
Grant Review Committee NCI ZCA1 SRRB-9 Special Emphasis Panel	2000-2001
Editorial Board American Journal of Neuroradiology	2002-present
Vice President American Society of Functional Neuroradiology	2004

Research Committee American Society of Neuroradiology	2007-2009
Treasurer American Society of Functional Neuroradiology	2008-2009

PROFESSIONAL MEMBERSHIPS:

American Board of Radiology Board certified, Diagnostic Radiology	1993
Certificate of Added Qualification, Neuroradiology Maintenance of Certification	1995 2005
Radiological Society of North America	1995
American College of Radiology	1995
American Society of Neuroradiology	1995
International Society for Magnetic Resonance in Medicine	1998

HONORS AND AWARDS:

Sanofi-Winthrop Fellow in Neuroradiology Hospital of the University of Pennsylvania	1993-1994
American Roentgen Ray Society Scholar	1999-2000

PROFESSIONAL INTERESTS:

Research Interests:

Dr. Maldjian is a neuroradiologist with expertise in interpretation of all neuroimaging modalities, as well as extensive experience in software development for a variety of neuroimaging processing applications. His research interests include advanced MRI applications in the CNS for research and clinical applications; Diffusion MRI; Functional MRI (fMRI); Perfusion MRI.

Dr. Maldjian has been involved in functional MRI studies since the inception of this technology in the early 1990's and is regarded as a leading investigator in neurosurgical applications of fMRI. He has established successful functional MRI labs at several institutions including the Hospital of the University of Pennsylvania, UMDNJ-New Jersey Medical School, and most recently at Wake Forest University Baptist Medical Center where he is currently Associate Professor of Radiology and Director of the Advanced Neuroscience Imaging Research Laboratory.

He is fluent in IDL, MATLAB, C, UNIX shell programming, in addition to some pulse programming experience for the General Electric (GE) LX MR platform. He has been involved in developing interfaces between real-time neurosurgical workstations and functional MRI for several years and has published several articles validating fMRI against intraoperative mapping using these interfaces.

He has demonstrated expertise in multimodal image software development, having integrated CT scan data into the IDLSPM processing environment and has developed methods for forward and backward DICOM conversion of image data. He has detailed knowledge of the GE MR systems and has developed methodologies for real-time archival of raw data, interrogation of the GE online magnet database, and methods for interfacing offline fMRI data to PACS.

Research in Progress:

The objective of Dr. Maldjian's R01 is to provide the neuroscience research community with a unique investigative tool for the seamless real-time integration of data from emerging imaging modalities (fMRI, PET, SPECT, MRS, and diffusion imaging). This will involve development of new statistical methodologies for multimodal image analysis, and the application of these tools to a population of dyslexics.

Dr. Maldjian has continued development of a distributed processing architecture for the automated processing of fMRI data sets. This has provided for unparalleled scaleable computational capacity placing Wake Forest at the forefront of computational capabilities in the neuroimaging arena. Most recently, these automated processing tools have enabled Wake Forest University to become the leading institution in the world in clinical Arterial Spin Labeled (ASL) MRI, with seamless translation of image acquisition, automated post-processing, and insertion into the Picture Archiving and Display System (PACS). Over the past year we have performed over 6000 clinical ASL MRI studies. This number is unapproached by any MR center anywhere. We have been invited to participate in a BIRN NIH grant application from Tom Liu at UCSD for inclusion of our perfusion experience in a Federated database for ASL Blood flow measures. We have seven papers currently in press related to our clinical ASL experience with an additional 5 under review, and we recently delivered 3 invited plenary presentations on our ASL experience at the ASFNR (American Society of Functional Neuroradiology) meeting in February 2008.

Other ongoing projects in the ANSIR lab include fMRI in dyslexia using cross-modal sensory processing tasks, fMRI of aging, studying the effects of caffeine using fMRI and perfusion imaging, and development of novel distortion correction and motion correction methods for MRI data.

GRANTS: CURRENT:

R01 EB004673
NIBIB/NIMH
2004-2009
\$2,296,568
Integrated Tool for Biological Parametric Mapping
Principal Investigator: **Joseph A. Maldjian, M.D.**

R01 Supplement- Training Grant
NIBIB: 1R01EB004673-02S1
2006-2008
\$119,064
Cerebral Diffusion and Perfusion Correlation using Biologic Parametric Mapping
Principal Investigator: **Joseph A. Maldjian, M.D.**

R01 Supplement- Training Grant
NIBIB: 1R01EB004673-02S2
2006-2008
\$119,064
Uncovering Brain Anatomy/ Function Relationships Using Biologic Parametric Mapping
Principal Investigator: **Joseph A. Maldjian, M.D.**

R01 NS058700

NINDS

2008-2013

\$528,996

Genetic Epidemiology of Cerebrovascular Disease and Cognition in Diabetes

Principal Investigator: Donald Bowden, PhD

R01 EB03880

NIBIB

\$281,043

2005-2009

Effect of Caffeine on Functional and Perfusion MRI

Principal Investigator: Paul Laurienti, MD, PhD

N01 HC 95182 (5%)

NIH

2004-2009

\$793,373

Accord-MIND Southeast

Principal Investigator: Jeff Williamson, M.D.

R01 HL076378-01 (5%)

NICHD/NCMRR

2004-2008

\$1,433,900

Carotid Atherosclerosis Progression Study (CAMP)

Principal Investigator: John Crouse, M.D.

N01 HC 95165

NIH/NHLBI

1999-2009

\$5,992,754

Multi Ethnic Study of Atherosclerosis –Field Center (MESA)

Principal Investigator: Greg Burke, M.D.

PENDING:

R03 EB008670

NIBIB/NIMH

2008-2009

\$100,000

WFU_Pickatlas Interoperability

Principal Investigator: **Joseph A. Maldjian, M.D.**

GRANT HISTORY:

R01 HD40984-01 (10%)

NICHD/NCMRR

2002-2006

\$1,906,960

Motor Map Plasticity in Constraint Therapy for Stroke

Principal Investigator: David Good, M.D.

BRACCO Pharmaceuticals

2003-2004

\$339,480

MH-109: "Phase IIIB, Double-Blind, Multi-Center, Randomized, Cross-Over Study to Compare 0.10mmol/kg of Multihance® With 0.10mmol/kg of Magnevist® Magnetic Resonance Imaging (MRI) of The Central Nervous System (CNS)"

Principal Investigator: **Joseph A. Maldjian, M.D.**

American Roentgen Ray Society - American Roentgen Ray Scholar

July 1999-June 2000

\$120,000

80% support towards a program study for 1 year

Areas of Functional MRI, MRI Pulse Programming, Perfusion Imaging, Cognitive Neuroscience, and Neurophysiology.

University of Pennsylvania Research Foundation

1998-1999

\$30,000

Functional MRI in Neurosurgical Patients

Principal Investigator: Joseph A. Maldjian, M.D.

Radiology Departmental Research Grant

1998-1999

\$9,960

High Resolution Functional MR Imaging at 4 Tesla

Principal Investigator: Joseph A. Maldjian, M.D.

GE Medical Systems Minigrant

1998-1999

\$15,836

Subclinical Stroke in Carotid Angiography

Principal Investigator: Joseph A. Maldjian

UMDNJ

1997-1998

\$25,000

Real-Time Intraoperative Functional MRI in Patients with Brain Tumors

Investigators: Joseph A. Maldjian (PI transferred to A. Holodny, M.D. upon leaving UMDNJ)

UMDNJ Foundation

1997-1998

\$25,000

Diffusion and Perfusion Imaging in Intractable Seizures

Co-investigator with A. Kalnin, M.D.

Chronic Fatigue Syndrome Cooperative Center NIH pilot project mini-grant

1995-1997

\$22,500

Functional Magnetic Resonance Imaging of Auditory Processing Deficits in Chronic Fatigue Syndrome

Co-investigator with G. Lange, Ph.D.

BIBLIOGRAPHY:

Book Chapters:

1. **Maldjian JA**. Basic principles of functional MRI, In *Practical Reviews in Radiology*, Baker S. (ed), 1995.
2. **Maldjian JA, Patel RS**. Cerebral Neoplasms in Adults, *Seminars in Roentgenology* 1999, Elsevier Press, 34(2), 102-122.
3. Kaufman JF, **Maldjian JA**. Fact or artifact in “Functional Neuroimaging: A clinical Approach”. Ed: Holodny, AI. Informa Healthcare, New York, 2008:39-51

Journal Articles:

1. Shapiro RS, **Maldjian JA**, Stancato-Pasik A, Ramos R. Hepatic mass in Budd-Chiari Syndrome: CT and MRI findings. *Comput Med Imaging Graph* 1993; 17:457-460.
2. Lidov MW, **Maldjian JA**, Glajchen N, Som PM. MR appearance of intraocular silicone oil. *J Comput Assist Tomogr* 1994; 18:131-132.
3. **Maldjian JA**, Norton KI, Groisman GM, Som PM. Inflammatory pseudotumor of the maxillary sinus in a pediatric patient. *AJNR Am J Neuroradiol* 1994; 15:784-786.
4. Atlas SW, Howard R, **Maldjian JA**, Alsop D, Detre J, Listerud J, D’Esposito M, Judy K, Zager E, Stecker M. Functional magnetic resonance imaging of regional brain activity in patients with intracerebral gliomas: findings and implications for clinical management. *Neurosurgery* 1996; 38:329-338.
5. Maldjian PD, Miller JA, **Maldjian JA**, Baker SR. An automated film masking and illuminating system versus conventional radiographic viewing equipment: a comparison of illuminating system versus conventional radiographic viewing equipment: a comparison of observer performance. *Acad Radiol* 1996; 3:827-833.
6. Wolansky L, Evans A, Belitsis K, Shaderowfsky P, Gonzales R, **Maldjian JA**, Lee H, Pak J. Fast inversion recovery for myelin suppression (FIRMS): a new MRI pulse sequence for highlighting cerebral gray matter. *Clinic Imaging* 1996; 20:164-170.
7. Alsop DC, Detre JA, D’Esposito M, Howard RS, **Maldjian JA**, Grossman M, Listerud J, Flamm ES, Judy KD, Atlas SW. Functional activation during an auditory comprehension task in patients with temporal lobe lesions. *Neuroimage* 1996; 4:55-59.
8. **Maldjian JA**, Atlas SW, Howard R, Greenstein E, Alsop D, Detre J, Listerud J, D’Esposito M, Flamm E. Functional magnetic resonance imaging of regional brain activity in patients with intracerebral arteriovenous malformations before surgical or endovascular therapy. *J Neurosurg* 1996; 84:477-483.
9. Holodny AI, Arutiunov NV, Kornienko WN, Gonzales R, Vaicys C, Petraikin AV, **Maldjian JA**. Aqueductal stenosis leading to herniation of the frontal horn of the lateral ventricle into the frontal sinus. *J Comput Assist Tomogr* 1997; 21:837-839.

10. **Maldjian JA**, Liu WC, Hirschorn D, Murthe R, Semanchuk W. Wavelet transform-based image compression for transmission of MR data. *AJR Am J Roentgenol* 1997; 169:23-26.
11. **Maldjian JA**, Schulder M, Liu WC, Mun IK, Hirschorn D, Murthy R, Carmel PK, Kalnin A. Intraoperative functional MRI using a real-time neurosurgical navigation system. *J Comput Assist Tomogr* 1997; 21:910-912.
12. Schulder M, **Maldjian JA**, Liu WC, Mun IK, Carmel PW. Functional image-guided surgery of intracranial tumors. *J Stereotact Funct Neurosurg* 1997; 68:98-105.
13. Schulder M, **Maldjian JA**, Liu WC, Holodny AI, Kalnin AJ, Mun IK, Carmel PW. Functional image-guided surgery of intracranial tumors in or near sensorimotor cortex. *J Neurosurg* 1998; 89:412-418.
14. Roychowdhury S, **Maldjian JA**, Galetta SL, Grossman RI. Postanoxic encephalopathy: diffusion MR findings. *J Comput Assist Tomogr* 1998; 22:992-994
15. **Maldjian JA**, *Patel RS*. Cerebral Neoplasms in Adults, *Neuroimaging Clin N AM*. 2001; 11(3) 547-569 (rep. from *Seminars in Roentgenology* 1999 34(2), 102-122).
16. Maldjian C, Adam R, **Maldjian JA**, Smith R. MRI appearance of the pelvis in the post Cesarean-section patient. *Magn Reson Imaging* 1999; 17:223-227.
17. Holodny AI, Schulder M, Liu WC, **Maldjian JA**, Kalnin AJ. Decreased activation of the motor and sensory cortex adjacent to a glioblastoma multiform using BOLD fMRI: implications for fMRI guided neurosurgery. *AJNR Am J Neuroradiol* 1999; 20:609-612.
18. Maldjian C, Adam R, Akhtar N, **Maldjian JA**, Boyko O, Bonakdarpour A. Volume (3-D) fast spin echo (VFSE) imaging of the lumbar spine. *Acad Radiol* 1999; 6:229-342.
19. Maldjian C, Adam R, Pelosi M 3rd, Rudelli RD, **Maldjian JA**. MRI appearance of placenta percreta and placenta accreta. *Magn Reson Imaging* 1999; 17:965-971.
20. Yousem DM, **Maldjian JA**, Hummel T, Alsop D, Geckle R, Doty R. Gender effects on odor-stimulated functional magnetic resonance imaging. *Brain Res* 1999; 818:480-487.
21. Yousem DM, **Maldjian JA**, Hummel T, Alsop D, Geckle R, Kraut M, Doty R. The effect of age on odor-stimulated functional magnetic resonance imaging. *AJNR Am J Neuroradiol* 1999; 20:600-608.
22. Mosier K, Liu WC, **Maldjian JA**, Sha R, Modi B. Lateralization of cortical function in swallowing: an fMRI study. *AJNR Am J Neuroradiol* 1999; 20:1520-1526.
23. **Maldjian JA**, Gottschalk A, Patel RS, Pincus D, Detre J, Alsop D. Mapping of secondary somatosensory cortex activation induced by vibrational stimulation: an fMRI study. *Brain Res* 1999; 824:291-295.
24. **Maldjian JA**, Gottschalk A, Patel RS, Detre J, Alsop D. The sensory somatotopic map of the human hand demonstrated at 4 Tesla. *Neuroimage* 1999, 10:55-62.
25. Liu A, **Maldjian JA**, Bagley LJ, Sinson GP, Grossman RI. Traumatic brain injury: findings at diffusion-weighted MR imaging. *AJNR Am J Neuroradiol* 1999; 20:1636-1641.

26. Mosier KM, Patel R, Liu W-C, Kalnin AJ, **Maldjian JA**, Baredes S. Cortical representation of swallowing in normal adults: functional implications. *Laryngoscope* 1999; 109:1-7
27. Lange G, DeLuca J, **Maldjian JA**, Lee H-J, Tiersky LA, Natelson BH. Brain MRI abnormalities exist in a subset of patients with chronic fatigue syndrome. *J Neurol Sci* 1999; 171:3-7.
28. **Maldjian JA**, Patel RS. Adult supratentorial neoplasms. *Semin in Roentgenol* 1999; 34:102-122.
29. McGarvey ML, Ferrante FM, Patel RS, **Maldjian JA**, Stecker M. Irreversible spinal cord injury as a complication of subarchnoid ethanol neurolysis. *Neurology* 2000, 54:1522-1524.
30. Maldjian C, Adam R, Rudelli R, **Maldjian JA**, Chew Q, Bonakdarpour A. Elastofibroma of the neck. *Skeletal Radiol* 2000; 29:109-111.
31. Holodny AI, Schulder M, Liu WC, Wolko J, **Maldjian JA**, Kalnin AJ. The effect of brain tumors on BOLD fMRI activation in the adjacent motor cortex: implications for image-guided neurosurgery. *AJNR Am J Neuroradiol* 2000; 21:1415-1422.
32. Chalela JA, Alsop DC, Gonzalez-Atavalez JB, **Maldjian JA**, Kasner SE, Detre JA. Magnetic resonance perfusion imaging in acute ischemic stroke using continuous arterial spin labeling. *Stroke* 2000; 31:680-687.
33. Levy-Reis I, Casasanto D, French JA, Alsop DA, **Maldjian JA**, Gonzalez-Atavalez JB, Detre JA. Absence of function and cortical reorganization in nevus linear subaceous syndrome (NLSS). *J Neuroimaging* 2000; 10(4): 225-228.
34. Roychowdhury S, **Maldjian JA**, Grossman RI. Multiple sclerosis: comparison of trace apparent diffusion coefficients with MR enhancement pattern of lesions. *AJNR Am J Neuroradiol* 2000; 21:869-874.
35. Gur RC, Alsop D, Glahn D, Petty R, Swanson CL, **Maldjian JA**, Turetsky BI, Detre JA, Gee J, Gur RE. An fMRI study of sex differences in regional activation to a verbal and a spatial task. *Brain Lang* 2000; 74:157-170.
36. **Maldjian JA**, Listerud J. Automated teaching file/slide database for digital images. *AJR Am J Roentgenol* 2000; 175:1249-1251.
37. Killgore WDS, Casasanto DJ, Yurglin-Todd D, **Maldjian JA**, Detre JA. Functional Activation of the Left Amygdala and Hippocampus during Associative Encoding of Faces. *Neuroreport* 2000, 11(10), 2259-2263.
38. Patel, RS, Yousem DM, **Maldjian JA**, Zager EL. Incidence and clinical significance of frontal sinus or orbit entry during pterional (front temporal) craniotomy. *AJNR Am J Neuroradiol* 2000, 21:1327-1330.
39. **Maldjian, JA**, Burdette JH. Neuroimaging expands with functional MRI. *Diagnostic Imaging* December 2001; *Advanced MR Supplement*.
40. **Maldjian JA**, Grossman RI. Future Applications of DWI in MS. *JNS* 186 (2001) S55-S57
41. **Maldjian JA**, Listerud J, Moonis G, Siddiqi F. Computing diffusion rates in T2-dark hematomas and areas of low T2 signal. *AJNR Am J Neuroradiol* 2001, 22:112-118.

42. **Maldjian JA**, Detre JA, Killgore WDS, Judy K, Alsop D, Grossman M, Glosser G. Neuropsychologic performance following resection of an activation cluster involved in cognitive memory function. *AJR Am J Roentgenol* 2001; 176:541-544.
43. Chalela JA, Wolf RL, **Maldjian JA**, Kasner SE. MRI Identification of Early White Matter Injury In Anoxic-Ischemic Encephalopathy. *Neurology* 2001; 56(4):481-485.
44. **Maldjian JA**, Chalela J, Kasner SE, Liebeskind D, Detre JA. Automated CT segmentation and analysis for acute MCA stroke. *AJNR Am J Neuroradiol* 2001; 22(6):1050-1055.
45. Wolf RL, Alsop DC, Levy-Reis I, Meyer PT, **Maldjian JA**, Gonzalez-Atavales J, French JA, Alavi A, Detre JA. Detection of mesial temporal lobe hypoperfusion in patients with temporal lobe epilepsy by use of arterial spin labeled perfusion MR imaging. *AJNR Am J Neuroradiol* 2001; 22:1334-1341.
46. Chepuri NB, Yen Y-F, Burdette JH, Li H, Moody DM, **Maldjian JA**. Diffusion anisotropy in the corpus callosum. *AJNR Am J Neuroradiol* 2002; 23:803-808.
47. **Maldjian JA**, Laurienti PJ, Driskill L, Burdette JH. Multiple reproducibility indices for evaluation of cognitive functional MR imaging paradigms. *AJNR Am J Neuroradiol* 2002; 23:1030-1037.
48. Laurienti PJ, Field AS, Burdette JH, **Maldjian JA**, Yen Y-F, Moody DM. Dietary caffeine consumption modulates fMRI measures. *NeuroImage* 2002; 17:751-757.
49. **Maldjian JA**, Listerud J, Khalsa S. Integrating post-processed functional MR images with picture archiving and communication systems. *AJNR Am J Neuroradiol* 2002; 23:1393-1397.
50. Franklin TR, Acton PD, **Maldjian JA**, Gray JD, Croft JR, Dackis CA, O'Brien CP, Childress AR. Decreased gray matter concentration in the insular, orbitofrontal, cingulate and temporal cortices of cocaine patients. *Biol Psychiatry* 2002; 51:134-142.
51. Langleben DD, Schroeder L, **Maldjian JA**, Gur RC, McDonald S, Ragland JD, O'Brien CP, Childress AR. Brain activity during simulated deception: an event-related functional magnetic resonance study. *Neuroimage* 2002; 15:727-732.
52. Casasanto DJ, Killgore WDS, **Maldjian JA**, Glosser G, Alsop DC, Cooke AM, Grossman M, Detre JA. Neural correlates of successful and unsuccessful verbal memory encoding. *Brain Lang* 2002; 80:287-295.
53. Gur RC, Schroeder L, Turner T, McGrath C, Chan RM, Turetsky BI, Alsop D, **Maldjian JA**, Gur RE. Brain activation during facial emotion processing. *NeuroImage* 2002; 16(3 Pt 1):651-662.
54. Gur RE, McGrath C, Chan RM, Schroeder L, Turner T, Turetsky BI, Kohler C, Alsop D, **Maldjian JA**, Ragland JD, Gur RC. An fMRI study of facial emotion processing in schizophrenia. *Am J Psychiatry* 2002; 159:1992-1999.
55. Gunning-dixon FM, Gur RC, Perkins AC, Schroeder L, Turner T, Turetsky BI, Chan RM, Loughhead JW, Alsop DC, **Maldjian JA**, Gur RE. Age-related differences in brain activation during emotional face processing. *Neurobiol Aging* 2003; 24:285-295.
56. Laurienti PJ, Wallace MT, **Maldjian JA**, Susi CM, Stein BE, Burdette JH. Cross-modal sensory processing in the anterior cingulate and medial prefrontal cortices. *Hum Brain Mapping* 2003; 19:213-223.

57. Wolf RL, Alsop DC, McGarvey ML, **Maldjian JA**, Wang J, Detre JA. Susceptibility contrast and arterial spin labeled perfusion MRI in cerebrovascular disease. *J Neuroimaging* 2003; 13:17-27.
58. Laurienti PJ, Field AS, Burdette JH, **Maldjian JA**, Yen Y-F, Moody DM. Relationship between caffeine-induced changes in resting cerebral perfusion and blood oxygenation level-dependent signal. *AJNR Am J Neuroradiol* 2003; 24:1607-1611.
59. **Maldjian JA**, Laurienti PJ, Burdette JH, Kraft RA. An automated method for neuroanatomic and cytoarchitectonic atlas-based interrogation of fMRI data sets. *NeuroImage* 2003; 19:1233-1239.
60. Laurienti PJ, Burdette JH, **Maldjian JA**. Separating neural processes using mixed event-related and epoch-based fMRI paradigms. *J Neurosci Methods* 2003; 131:41-50.
61. Wang J, Alsop DC, Song HK, **Maldjian JA**, Tang K, Salvucci AE, Detre JA. Arterial transit time imaging with flow encoding arterial spin tagging (FEAST). *Magn Reson Med* 2003; 50:599-607.
62. **Maldjian JA**, Laurienti PJ, Burdette JH. Precentral gyrus discrepancy in electronic versions of the Talairach atlas. *NeuroImage* 2004; 21:450-455.
63. Ances BM, McGarvey ML, Abrahams JM, **Maldjian JA**, Alsop DC, Zager EL, Detre JA. Continuous arterial spin labeled perfusion magnetic resonance imaging in patients before and after carotid endarterectomy. *J Neuroimaging*. 2004 Apr;14(2):133-8.
64. Laurienti PJ, Kraft RA, **Maldjian JA**, Burdette JH, Wallace MT. Semantic congruence is a critical factor in multisensory behavioral performance. *Exp Brain Res* 2004; 158:405-414.
65. Laurienti PJ, Burdette JH, **Maldjian JA**, Wallace MT. Enhanced Multisensory Integration in Older Adults. *Neurobiology of Aging*. 2006 Aug; 27(8): 1155-63.
66. Ryali S, Casanova R, , Laurienti PJ, Peiffer AM, Maldjian JA. Estimation of False Discovery Rates for Wavelet-Denoised Statistical Parametric Maps. *Neuroimage* 2006, 33, 72-84
67. Maravilla KR, Maldjian JA, Schmalfluss IM, Kuhn MJ, Bowen BC, Wippold FJ 2nd, Runge VM, Knopp MV, Kremer S, Wolansky LJ, Anzalone N, Essig M, Gustafsson L. Contrast enhancement of central nervous system lesions: multicenter intraindividual crossover comparative study of two MR contrast agents. *Radiology* 2006 240(2):389-400.
68. Zimmerman RD, **Maldjian JA**, Brun NC, Horvath B, Skolnick BE. Radiologic estimation of hematoma volume in intracerebral hemorrhage trial by CT scan. *AJNR* 2006 27(3):666-70.
69. Kuhn MJ, Picozzi P, **Maldjian JA**, Schmalfluss IM, Maravilla KR, Bowen BC, Wippold FJ 2nd, Runge VM, Knopp MV, Wolansky LJ, Gustafsson L, Essig M, Anzalone N. J Evaluation of intraaxial enhancing brain tumors on magnetic resonance imaging: intraindividual crossover comparison of gadobenate dimeglumine and gadopentetate dimeglumine for visualization and assessment, and implications for surgical intervention. *Neurosurg* 2007 106(4):557-66.
70. Casanova R, Ryali S, , Baer A, Laurienti PJ, Burdette JH, Hayasaka S, Flowers F, Wood J, **Maldjian JA**. Biological Parametric Mapping: A Statistical Toolbox for Multi-Modality Brain Image Analysis. *Neuroimage* 2007, Vol. 34,137-143.

71. Hugenschmidt CE, Peiffer AM, Kraft RA, Casanova R, Deibler AR, Burdette JH, **Maldjian JA**, Laurienti PJ. Relating imaging indices of white matter integrity and volume in healthy older adults. *Cerebral Cortex* 2008, 18(2), 433-42.
72. Peiffer AM, Hugenschmidt CE, Maldjian JA, Casanova R, Srikanth R, Hayasaka S, Burdette JH, Kraft RA, & Laurienti PJ. (2007) Aging and the interaction of sensory cortical function and structure. *Human Brain Mapping*
73. Casanova R, Ryali S, Serences J, Yang L, Kraft R, Laurienti PJ, **Maldjian JA**. The impact of temporal regularization on estimates of the BOLD hemodynamic response function: a comparative analysis. *NeuroImage* 2008; 40:1606-18.
74. Peiffer AM, **Maldjian JA**, Laurienti PJ. Resurrecting Brinley Plots for a Novel Use: Meta-Analyses of Functional Brain Imaging Data in Older Adults. *International Journal of Biomedical Imaging*, vol. 2008, Article ID 167078, 7 pages, doi:10.1155/2008/167078.
75. Hairston WD, Hodges DA, **Maldjian JA**, Burdette JH. Closing the mind's eye: deactivation of visual cortex related to auditory task difficulty. *NeuroReport* 2008,19(2), 151-54.
76. **Maldjian JA**, Laurienti PJ, Burdette JH, Kraft RA. Clinical Implementation of Spin Tag Perfusion MRI. *JCAT* 2008 32(3): 403-406.
77. Pollock JM, Deibler AR, West TG ,Burdette JH, Kraft RA, **Maldjian JA**. Arterial Spin Labeled MRI in hyperperfused seizure focus: a Case Report. *JCAT* 2008 32(2):291-292.
78. Deibler AR, Pollock JM, Kraft RA, Tan H, Burdette JH, **Maldjian JA**. Arterial Spin Labeling in Routine Clinical Practice Part I: Technique and Artifacts. *AJNR* (in press).
79. Deibler AR, Pollock JM, Kraft RA, Tan H, Burdette JH, **Maldjian JA**. Arterial Spin Labeling in Routine Clinical Practice Part II: Hypoperfusion Patterns. *AJNR* (in press).
80. Deibler AR, Pollock JM, Kraft RA, Tan H, Burdette JH, **Maldjian JA**. Arterial Spin Labeling in Routine Clinical Practice Part III: Hyperperfusion Patterns. *AJNR* (in press).
81. Pollock JM, Whitlow CT, Deibler AR, Burdette JH, Kraft RA, Tan H, **Maldjian JA**. Anoxic Injury Associated Cerebral Hyperperfusion Identified with Arterial Spin Labeled MRI. *AJNR*, in press.
82. Pollock JM, Deibler AR, Burdette JH, Kraft RA, Tan H, Evans AB, **Maldjian JA**. Migraine Associated Cerebral Hyperperfusion with Arterial Spin Labeled MR Imaging, *AJNR*, (in press).
83. Underhill HR, Yuan C, Terry JG, Chen H, Espeland MA, Hatsukami TS, Saam T, Chu B, Yu W, Oikawa M, Takaya N, Yarnykh VL, Kraft RA, Carr JJ, **Maldjian JA**, Tang R, Crouse JR 3rd. Differences in Carotid Arterial Morphology and Composition Between Individuals with and Without Obstructive Coronary Artery Disease; A Cardiovascular Magnetic Resonance Study. *J Cardiovasc Magn Reson*, 2008; June 12;10(1);31.

BIBLIOGRAPHY:

Abstracts:

1. Gallo R, **Maldjian JA**, Kamat S. Computers in medial research and education. Computers in Health Sciences Symposium, November 1988, Newark, NJ.

2. **Maldjian JA**, Hermann G. Expert systems in radiologic diagnosis: an application program, Fourteenth Annual Symposium on Computer Applications in Medical Care, November, 1990, Washington, DC.
3. **Maldjian JA**, Hermann G. Bonepro: A PC-based teaching tool for the analysis of the solitary bone tumor. American Roentgen Ray Society 92nd Annual Meeting, May, 1992, Orlando, Florida.
4. **Maldjian JA**, Howard RS, van Buchem M, Alsop D, Detre J, Listerud J, Zager E, Judy K, Flamm E, Hurst R, Atlas SW. Functional MR imaging of regional brain activity in patients with intracerebral arteriovenous malformations before surgical or endovascular therapy. Radiological Society of North America, November 1994, Chicago, Illinois.
5. Howard RS, **Maldjian JA**, van Buchem M, Alsop D, Detre J, D'Esposito M, Listerud J, Judy K, Atlas SW. Anatomical and semiquantitative analysis of speech and motor cortex activity using BOLD functional MR imaging (fMRI) in patients with infiltrative gliomas. ASNR, April 1995, Chicago, Illinois.
6. **Maldjian JA**, Howard RS, van Buchem M, Alsop D. Time domain cross correlation analysis of functional MRI data sets. ASNR, April 1995, Chicago, Illinois.
7. Zukerberg BW, Tse K, Buchpiguel C, Ozgen P, Atlas S, **Maldjian JA**, Howard RS, Alavi A. Comparison of dynamic thallium brain SPECT and MRI in the diagnosis of recurrent brain tumor from radiation necrosis. Annual Meeting of the Society of Nuclear Medicine, June 1995, Minneapolis, Minnesota.
8. Judy KD, **Maldjian JA**, Howard RS, Atlas SW, Kotapka MJ, Ruffer J, Flamm ES. Functional MRI to plot motor and speech areas in the resection of brain tumors and AVMs. Congress of Neurological Surgeons Annual Meeting, October 1995, San Francisco, California.
9. Atlas SW, **Maldjian JA**, Listerud J. Time-shift mapping of neural systems on functional MR images. RSNA, November 1995, Chicago, Illinois.
10. Liu WC, **Maldjian JA**, Lange G, Deluca J, Natelson BH. Narrow task activation fMRI. AAPM, July 1996, Philadelphia, PA.
11. **Maldjian JA**, Murthy R, Liu WC, Lange G, Deluca J, Natelson BH. Wavelet-Transform optimization methods in the filtering of functional MR imaging data sets. RSNA, December 1996, Chicago, IL.
12. **Maldjian JA**, Schulder M, Liu WC, Mun IK, Hirschorn D, Murthy R, Carmel P. Integrating functional MRI with a real-time neurosurgical navigation system. SMRM, April 1997, Vancouver, Canada.
13. Mosier K, Liu WC, **Maldjian JA**. Functional MRI of swallowing. SMRM, April 1997, Vancouver, Canada.
14. Holodny AI, Arutiunov NV, Kornienko VN, Gonzales R, Vaicys C, Petraikin AV, **Maldjian JA**. Aqueductal stenosis leading to herniation of the frontal horn of the lateral ventricle into the frontal sinus. ASNR, May 1997 Toronto, Canada.
15. **Maldjian JA**, Schulder M, Mun IK, Liu WC, Murthe R, Hirschorn D, Carmel P. Intraoperative functional MRI using a real-time neurosurgical navigation system. ASNR, May 1997, Toronto, Canada.

16. Liu AY, **Maldjian JA**, Bagley LJ, Grossman RI. Use of diffusion-weighted imaging in the evaluation of traumatic brain injury. ISMRM, April 1998, Sydney, Australia.
17. **Maldjian JA**, Patel RS, McGowan J, Alsop D. Optimization of echo-planar BOLD fMRI at 4T. ASNR, May 1998 Philadelphia, PA.
18. **Maldjian JA**, Gottschalk A, Patel RS, Detre J, Alsop D. Sensory somatotopic mapping of the human hand at 4T. ASNR, May 1998 Philadelphia, PA.
19. Yousem DM, **Maldjian JA**, Hummel T, Geckle RJ, Sidiqi F, Doty RL. Gender, age, and handedness differences in the response to odorants as determined by functional MR imaging. ASNR, May 1998 Philadelphia, PA.
20. Holodny AI, Schulder M, Liu WC, **Maldjian JA**, Kalnin AJ. Possible limitations of presurgical evaluation of the eloquent cortices by BOLD functional MR imaging in gliomas due to loss of autoregulation of the tumor vasculature. ASNR, May 1998 Philadelphia, PA.
21. Yousem DM, **Maldjian JA**, Hummel T, Geckle RJ, Sidiqi F, Doty RL. Differences between olfactory and trigeminally mediated stimulants on functional MR studies. ASNR, May 1998 Philadelphia, PA.
22. Killgore WDS, Glosser G, Cooke AN, Grossman M, **Maldjian JA**, Judy K, Baltuch G, King D, Alsop D, Detre JA. Functional activation during verbal memory encoding in patients with lateralized focal lesions [Abstract]. *Epilepsia* 1998; 39(Suppl. 6): 99.
23. Detre JA, Chalela J, Gonzalea-Atavales J, Wolf RL, **Maldjian JA**, Alsop DC. Multislice continuous arterial spin labeled perfusion MRI in patients with acute stroke. ISMRM, May 1999, Philadelphia, PA.
24. Wolf, RL, Alsop DC, French JA, Gonzalez-Atavales J., Reis, IL, **Maldjian JA**, Detre JA. Detection of mesial temporal lobe hypoperfusion in patients with temporal lobe epilepsy using multislice continuous arterial spin labeled perfusion MRI. ISMRM, May 1999, Philadelphia, PA, MRI EPILEPSIA 40: 249-249, Suppl. 7 1999.
25. **Maldjian JA**, Gottschalk A., Detre JA, Alsop D. Basal ganglia and white matter activation using functional MRI at 4 Tesla. ISMRM, May 1999, Philadelphia, PA.
26. Killgore WDS, Casasanto DJ, **Maldjian JA**, Alsop DC, Glosser G, French J, Detre JA. Functional activation of mesial temporal lobe during nonverbal encoding [abstract]. *Epilepsia*, 1999; 40 (Supplement 7): 188.
27. Alsop DC, **Maldjian JA**, Detre JA. In vivo MR perfusion imaging of the human retina. ISMRM, April 2000, Denver, CO
28. Casasanto DJ, Killgore WDS, **Maldjian JA**, Gonzales-Atavales J, Glosser G, Detre JA. Task-dependent and task-invariant activation in mesial temporal lobe structures during fMRI explicit encoding tasks [abstract]. *Journal of the International Neuropsychological Society*, 2000; 6: 134.
29. Siddiqi F, Casasanto DJ, Killgore WDS, Detre JA, Glosser G, Alsop DC, **Maldjian JA**. Hemispheric effects of frontal lobe tumors on mesial temporal lobe activation during scene encoding [abstract]. *Neuroimage*, 2000; 11:S448.

30. Killgore WDS, Casasanto DJ, **Maldjian JA**, Gonzales-Atavales J, Detre JA. Associative memory for faces preferentially activates the left amygdala and hippocampus [abstract]. *Journal of the International Neuropsychological Society*, 2000; 6:157.
31. Casasanto DJ, Killgore WDS, Glosser G, **Maldjian JA**, Detre JA. Hemispheric specialization during episodic memory encoding in the human hippocampus and MTL. *Proceedings of the Society for Cognitive Neuroscience 2000*: Philadelphia, PA.
32. Casasanto DJ, Killgore WDS, **Maldjian, JA**, Glosser G, Grossman M, Alsop DC, Detre JA. Neural Correlates of Successful and Unsuccessful Verbal Encoding [abstract]. *Neuroimage*, 2000; 11:S381.
33. Casasanto DJ, Glosser G, Killgore WDS, Siddiqi F, Falk M, Roc A, **Maldjian JA**, Levy-Reis I, Baltuch MG, Detre JA. Presurgical fMRI predicts memory outcome following anterior temporal lobectomy. Paper accepted for oral presentation at the 29th Annual Meeting of the International Neuropsychological Society (Winner 2001 Rennick Award), February 14-17, 2001.
34. Lovelace CT, **Maldjian JA**, Wittenberg GF. Neurobiological investigation of self-care behavior. *Psychophysiology* 2003; 40(Suppl 1):S56.
35. Burdette JH, Laurienti PJ, Flowers L, Wood FB, Kraft R, **Maldjian JA**. Altered auditory-visual interactions in dyslexia: an fMRI study. *RSNA 2003*:462.
36. Maldjian JA, Burdette JH, Kraft RA, Flowers DL, Wood FB, Laurienti PJ. Identifying the relationship between fMRI and structural brain changes in dyslexia: A Biologic Parametric Mapping study. *Am Soc Neuroradiol Washington, DC*, 2003.
37. Wittenberg GF, Lovelace CT, Foster DJ, **Maldjian JA**. The physiology of self-care: functional imaging of dressing tasks after recovery from stroke. *Stroke* 2004; 35:285.
38. Hairston WD, Hugenschmidt CE, Wallace MT, Kraft RA, **Maldjian JA**, Laurienti PJ. Attention-Modulated Gating of Cross-Modal Cortical Deactivation. Program No. 177.14. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2004.
39. Burdette JH, Laurienti PJ, **Maldjian JA**, Flowers DL, Kraft RA, Wood FB. Voxel-based Morphometric Differences between Typical and Dyslexic Readers; Program No. 643.1. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005.
40. Peiffer AM, Hugenschmidt CE, **Maldjian JA**, Casanova R, Srikanth R, Burdette JH, Kraft RA, Laurienti PJ. Aging and the Interaction of Sensory Cortices. Program No. 617.18. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2005.
41. Maldjian JA, Laurienti PJ, Kraft RA, Flowers DL, Wood FB, Milner L, Burdette JH. Structural brain changes predict functional activation in dyslexia. *Am Soc Neuroradiol Toronto, On*, 2005.
42. Casanova R, Ryali S, Bare A, Laurienti PJ, Hayasaka S, Burdette JH, Wood F, **Maldjian JA**. Biologic Parametric Mapping. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy, 2006.
43. Hugenschmidt CE, Peiffer AM, **Maldjian JA**, Casanova R, Ryali S, Burdette JH, Kraft RA, Laurienti PJ. Relationships Between Age-Related Changes in White Matter Concentration and Fractional Anisotropy. Program No. 489T. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy, 2006.

44. Peiffer AM, **Maldjian JA**, Laurienti PJ. Evaluating Age Related Changes in Brain Function Using a Novel Meta-Analysis of fMRI Data. Program No. 133M. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy, 2006.
45. Burnett LR, Kraft RA, **Maldjian JA**, Burdette JH, Chen MY, Yang L, Laurienti PJ. Caffeine Induces Bold Signal Decreases in Subjects Without Pre-Scan Withdrawal. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy, 2006.
46. Casanova R, Ryali S, Bare A, Laurienti PJ, Peiffer AM, Hayasaka S, Burdette JH, **Maldjian JA**. Biological Parametric Mapping. Program No. 2797. 2006 Abstract, ISMRM. Scientific Conference, Seattle, Washington, 2006.
47. Ryali S, Casanova R, Laurienti PJ, Peiffer AM, **Maldjian JA**. Estimation of False Discovery Rates for Wavelet-Denoised Statistical Parametric Maps. 2006 Abstract, ISMRM Scientific Conference, Seattle, Washington, 2006.
48. Casanova R, Laurienti PJ, **Maldjian JA**, Peiffer AM, Ryali S. Statistical inference for Wavelet-Denoised Statistical Parametric Maps. Program No. 2858. 2006 Abstract, ISMRM, Seattle, Washington, 2006.
49. Hairston, WD, Burdette, JH, Flowers, DL, Wallace, MT, and **Maldjian, JA**. The effect of grey matter on functional differences in cross-modal processing in dyslexia. Program No. 137.5. *2006 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2006. Online.
50. Hairston, WD, Casanova, RL, and **Maldjian, JA**. Biological Parametric Mapping Toolbox. Public Demonstration; Human Brain Project Booth, Atlanta, GA. Washington, DC: Society for Neuroscience, 2006.
51. Casanova, R, Ryali, S, Baer, A, Laurienti, P, Peiffer, AM, Hayasaka, S, Burdette, J, & **Maldjian, J**. Biological Parametric Mapping. Program No. 2797. ISMRM. Seattle, WA 2006.
52. Kaufman, JF, Bowden, DW, Laurienti, PJ, **Maldjian, JA**. Comparison of White Matter Hyperintensity and Brain Perfusion Using Quantitative Arterial Spin Labeled MR Imaging. Radiologic Society of North America, Chicago, Illinois, 2006.)
53. Casanova R, Hayasaka S, Laurienti PJ, Hayasaka S, **Maldjian JA**. Multiple hypotheses testing and family-wise error rate (FWER) control in the context of SPM analyses with voxel-wise covariates: A simulation study. *Annual Meeting of Organization for Human Brain Mapping*, Chicago, Il, June 2007.
54. Casanova R, Hayasaka S, Laurienti PJ, Hayasaka S, **Maldjian JA**. A non-parametric approach to SPM analyses with voxel-wise covariates. *Annual Meeting of Organization for Human Brain Mapping*, Chicago, Il, June 2007
55. Casanova R, Srikanth R, Serences JT, Laurienti PJ, **Maldjian JA**. A comparative study of hemodynamic response function (HRF) deconvolution methods. *Annual Meeting of Organization for Human Brain Mapping*, Chicago, Il, June 2007.
56. Hairston, W. D., Burdette, J, **Maldjian, J**, Mace, S., and Hodges, D. Cross-modal deactivation related to task difficulty: non-musicians versus conductors. *Annual Meeting of Organization for Human Brain Mapping*, Chicago, Il, June 2007

57. Hugenschmidt, CE, Lobanov, O, **Maldjian, JA**, Burdette, JB, Laurienti, PJ. The effects of healthy aging on cross-modal selective attention: preliminary results from a psychophysical and fMRI study. Bloomington, IN: Aging and Speech Communication Conference, 2007.
58. W.D. Hairston, J.H. Burdette, D. Flowers, M.T. Wallace, **J.A. Maldjian**. The effect of grey matter on functional differences in cross-modal processing in dyslexia. Program No. 137.5. *2006 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2006. Online.
59. Peiffer AM, **Maldjian JA**, & Laurienti PJ. Evaluating Age-Related Changes in Brain Function Using a Novel Meta-Analysis of fMRI Data. Program No. 133M. 2006 Abstract HBM. Florence, Italy: 2006.
60. Yang LL, Peiffer AM, Addicott MA, Kraft RA, **Maldjian JA**, Burdette JH, Burnett LR, Chen MY, & Laurienti PJ. BOLD Signal Decreases Following Caffeine Challenge in Individuals Who Intake High Daily Doses of Caffeine. Program No. 396M. 2007 Abstract, Human Brain Mapping Conference, Chicago, IL: 2007
61. Peiffer AM, Burdette JH, Laurienti PJ, Flowers L, **Maldjian JA**, Milner L, & Wood F. Evaluating Dyslexia Across Multiple Speech Conditions Using a Novel fMRI Meta-Analysis Technique. Program No. 186T. 2007 Abstract, Human Brain Mapping Conference, Chicago, IL: 2007.
62. Hugenschmidt CE, Peiffer AM, Casanova R, **Maldjian JA**, Burdette JH, & Laurienti PJ. Preservation of Default Mode Functioning in Healthy Aging Adults. Program No. 49TH. 2007 Abstract, Human Brain Mapping Conference, Chicago, IL: 2007.
63. Yang LL, Casanova R, Peiffer AM, Addicott MA, Kraft RA, **Maldjian JA**, Burdette JH, Hayasaka S, Burnett LR, Chen MY & Laurienti PJ. Evaluating BOLD signal time course in pharmacological functional MRI. Program No. 119.6. 2007 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2007. Online.
64. Addicott MA, Peiffer AM, Yang LL, Kraft RA, **Maldjian JA**, Burdette JH, Burnett LR, Chen MY, & Laurienti PJ. The effects of caffeine on cerebral Perfusion in Withdrawal and Native States. Program No. 369M. 2007 Abstract, Human Brain Mapping Conference, Chicago, IL: 2007.
65. Yang L, Casanova R, Peiffer A, Addicott M, Kraft RA, **Maldjian JA**, Burdette JH, Hayasaka S, Burnett L, Chen M, Laurienti PJ. "Functional MRI time course metrics as a measure of neural activity when drugs affect vascular tone." Society for Neuroscience, 2007. Abstract and Oral Presentation.
66. Ramon Casanova, Satoru Hayasaka, Paul J. Laurienti, **Joseph A. Maldjian** Multiple hypotheses testing and family-wise error rate (FWER) control in the context of SPM analyses with voxel-wise covariates: A simulation study.
67. Ramon Casanova, Srikanth Ryali, John T. Serences, Paul J. Laurienti, **Joseph A. Maldjian** A comparative study of hemodynamic response function (HRF) deconvolution methods.
68. Burnett L, Kraft RA, **Maldjian JA**, Burdette JH, Chen M, Yang L, Laurienti PJ. "Caffeine Induces BOLD Signal Decreases in Subjects Without Pre-scan Withdrawl." Organization for Human Brain Mapping, 2006. Abstract and Poster Presentation.
69. Whitlow CT, Pollock JM, Mussat-Whitlow BJ, Kraft RA, Tan H, Burdette JH, **Maldjian JA**. Changes in Global Rates of Cerebral Perfusion Associated with Normal Development as Measured

with MR Arterial Spin Labeling. American Society of Neuroradiology 46th Annual Meeting, 2008, New Orleans, Louisiana.

70. Pollock JM, West TG, Deibler A, Kraft R, Tan H, **Maldjian JA**. MRI Perfusion Imaging: from ASL to DSC. Southern Radiological Conference. Mobile, AL. 2008.
71. Pollock JM, West TG, Deibler A, Kraft R, **Maldjian JA**. Arterial Spin Labeling in Stroke management and Brain Tumor Evaluation: Experience in over 6000 cases. American Society of Functional Neuroradiology. Orlando. 2008.
72. Whitlow CT, Pollock JM, Kraft RA, Mussat-Whitlow B, Tan H, Burdette JH, **Maldjian JA**. Age-Related Changes in Global Rates of Cerebral Perfusion in Normal Children, Adolescents, and Young Adults: A Magnetic Resonance Arterial Spin Labeling Investigation. American Society of Functional Neuroradiology. Orlando 2008.
73. Whitlow CT, Pollock JM, Kraft RA, Mussat-Whitlow B, Tan H, Burdette JH, **Maldjian JA**. Evolving Temporal Changes in Cerebral Blood Flow Associated with Posterior Reversible Encephalopathy Syndrome: A Magnetic Resonance Arterial Spin Labeling Investigation. American Society of Functional Neuroradiology. Orlando 2008.
74. Pollock JM, West TG, Deibler A, Kraft R, Tan H, **Maldjian JA**. Cerebral Hyperperfusion with Arterial Spin Labeling: Clinical Experience in over 2000 cases. Educational Exhibit #364. American Roentgen Ray Society. Washington D.C. 2008.
75. Tan H, **Maldjian JA**, Burdette JH, Deibler AR, Pollock JM, Kraft RA. PASL Filtering: A Method of Improving Clinical Perfusion Imaging. Presented at ISMRM, Toronto, Canada. May 2008.
76. Tan H, Hamilton CA, Kraft RA. Quantitative Perfusion Imaging Using Q2TIPS-FAIR PROPELLER EPI. Presented at ISMRM, Toronto, Canada. May 2008.
77. Hayasaka S, Laurienti P, **Maldjian J**. A Framework for Analyzing and Visualizing Multi-Modality Cross-Correlation. Organization for Human Brain Mapping Conference, Melbourne, Australia. June 2008.
78. Hairston, W. D., Casanova, R., Burdette, J., Wood, F., & **Maldjian, J**. (June, 2008). Cross-modal temporal integration in dyslexia explored with Biological Parametric Mapping. Annual Meeting of Organization for Human Brain Mapping, June 2008, Melbourne, Australia.
79. Yang LL, Addicott MA, Peiffer AM, Kraft RA, **Maldjian JA**, Burdette JH, Burnett LR, Chen MY, & Laurienti PJ. Caffeine is not a universal BOLD contrast booster. 2008 Abstract, Human Brain Mapping Conference, Melbourne, Australia: 2008.
80. Addicott MA, Yang LL, Casanova R, Peiffer AM, **Maldjian JA**, Burdette JH, Burnett LR, & Laurienti PJ. The effects of chronic caffeine use on the temporal dynamics of the BOLD signal. 2008 Abstract, Human Brain Mapping Conference, Melbourne, Australia: 2008.
81. Whitlow CT, Pollock JM, Mussat-Whitlow BJ, Kraft RA, Tan H, Burdette JH, **Maldjian JA**. Changes in Global Rates of Cerebral Perfusion Associated with Normal Development as Measured with MR Arterial Spin Labeling. American Society of Neuroradiology 46th Annual Meeting, 2008, New Orleans, Louisiana.

82. Shear, S.K., Hairston, W.D., Wood, F. Flowers, D.L., **Maldjian, J**, Laurienti, P., and Burdette, J. (July 2008). Measuring the Neural Correlates of Dyslexia with Diffusion Tensor Imaging. Linguistics Society of America Summer Meeting, Ohio State University, Columbus, Ohio.
83. Pollock JM, Deibler A, Burdette JH, Kraft A, Tan H, Evans AB, **Maldjian JA**. Arterial Spin Labeled MRI in Migraine Evaluation. American Society of Neuroradiology. New Orleans 2008.
84. W.D. Hairston, J.H. Burdette, F. B. Wood, M.T. Wallace, **J.A. Maldjian**. (Nov 2008). Biological Parametric Mapping reveals an interaction in cross-modal suppression related to dyslexia. Annual Meeting of the Society for Neuroscience, November 2008, Washington, DC.
85. Hodges, D., Hairston, W. D., **Maldjian, J**, and Burdette, J. (August 2008). Cross-modal Deactivations are Minimized in Conductors. International Conference on Music Perception and Cognition, Sapporo, Japan.
86. Whitlow CT, Pollock JM, Mussat-Whitlow BJ, Kraft RA, Tan H, Burdette JH, **Maldjian JA**. Age-Related Changes in Global Rates of Cerebral Perfusion From Birth to Age 92: A Magnetic Resonance Arterial Spin Labeling Investigation. Submitted: Radiological Society of North America's 94th Scientific Assembly and Annual Meeting, 2008, Chicago, Illinois.

BIBLIOGRAPHY

Scientific Exhibits:

1. Howard R, **Maldjian JA**, Alsop D, Detre J, Listerud J, Zager E, Judy K, Flamm E, Hurst R, Atlas SW. Functional MRI of regional brain activity in patients with intracerebral gliomas and AVMs prior to surgical or endovascular therapy. SMRM, San Francisco, California, August 1994.
2. Atlas SW, **Maldjian JA**, Listerud J. Time Domain Cross Correlation Analysis of Functional MRI Data during Complex Tasks, SMRM, Nice, France, August 1995.
3. **Maldjian JA**. Basic principles of functional MRI, Practical Reviews in Radiology, audiotape series, 1995.
4. Wolansky L, Evans A, Gonzales R, **Maldjian JA**, Pak J, Marks D, Lee H, Cook S. Clinical uses of FIRMS (Fast Inversion Recovery for Myelin Suppression): a new MRI pulse sequence. 19th annual meeting of the American Society of Neuroimaging, Oakland, California, March 21-23, 1996
5. **Maldjian JA**, Liu WC, Lange G, Deluca J, Natelson BH. Comparison of the wavelet transform to conventional digital filtering techniques on fMRI data set. SMRM, New York, New York, April 1996.
6. **Maldjian JA**, Liu WC, Lange G, Deluca J, Natelson BH. Ultra-high frequency task activation fMRI: timing constraints. Brain Mapping, Boston, Massachusetts, June 1996.
7. Deutsch JE, Liu WC, **Maldjian JA**, Deluca J. Mental practice and motor skill acquisition: an fMRI study. Society for Neuroscience 26th Annual Meeting, Washington, DC, November 1996.
8. **Maldjian JA**, Yousem DM, Hummel T, Alsop D, Geckle R, Doty R. Olfactory stimulated functional MRI: effects of age, sex and handedness. ISMRM, Sydney, Australia, April 1998.

9. **Maldjian JA**, Yousem DM, Hummel T, Alsop D, Geckle R, Doty R. Olfactory stimulated functional MRI in congenital anosmia and Parkinson's disease. ISMRM, Sydney, Australia, April 1998.
10. Patel RS, **Maldjian JA**, McGowan JC. Diffusion Imaging Interpretation Strategies: Characterizing the Light Bulb Lesion. ISMRM, Sydney, Australia, April 1998.
11. Killgore WDS, Glosser G, Cooke A, Grossman M, **Maldjian JA**, Judy K, Baltuch G, King D, Gonzalez-Atavales J, Alsop D, Detre J. Functional activation during verbal memory encoding in patients with lateralized focal lesions. San Diego, California, December 1998.
12. Casasanto DJ, Glosser G, Killgore WDS, Siddiqi F, Falk M, **Maldjian JA**, Lev-Reis I, Detre JD. fMRI evidence for the functional reserve model of post-ATL neuropsychological outcome prediction. Poster presented at the David Mahoney Institute of Neurological Sciences 17th Annual Neuroscience Retreat, University of Pennsylvania, April 17, 2000.
13. Casanova, R, Ryali, S, Baer, A, Laurienti, P, Pearson, K, Maldjian JA. The Biological Parametric Mapping Toolbox. Public Demonstration; Human Brain Project. Booth. Washington, DC: Society for Neuroscience, 2005.

MISCELLANEOUS:

1. **Maldjian JA**. Functional connectivity MRI: fact or artifact? AJNR Am J Neuroradiol [Editorial] 2001,22:239-240
2. **Maldjian JA**. Brain atlas for functional imaging: clinical and research applications, version 1.0, by Wieslaw L, Nowinski A, Thirunavuukarasuu , Kennedy DN. AJR Am J Roentgenol 2002; 178:158. [software review]
3. **Maldjian JA**, Listerud J. Diffusion Findings in Blood Clot: The Last Word? AJNR 2004; 25: 157-158.

COMPUTER SKILLS:

Programming Languages: IDL, Matlab, C, Pascal, Prolog, Basic, Fortran, Unix shell programming (ksh, csh, tcsh) some pulse programming for GE Signa 5X and LX systems.

1997-2000: System administrator to heterogeneous environment comprised of 5 Ultrasparc Sun Solaris Unix workstations (2 ultra 1, 2 ultra 10, 1 ultra 60), Linux workstation (Dell, Redhat 6.1) 2 Macintosh G3 computers, 3 network printers (HP 5M laserjet, Tektronix 740 color laser, Epson 900 network inkjet), and over .2 Terabytes of data.

COMMUNITY SERVICE:

Support for Armenian Church, Salvation Army, Good Will, Cancer Society.

PERSONAL INTEREST:

Raising a traditional Armenian family against all odds in Mocksville, North Carolina.

Classically trained pianist. http://www.fmri.wfubmc.edu/JAM_MP3.htm

Computer programming

Intramural Sports (football, softball)

Starting a farm for alpacas, llamas, goats, and other small animals.