

1. Biographical Sketch**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.
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NAME Weihong Yuan, Ph.D.		POSITION TITLE Research Assistant Professor of Radiology	
eRA COMMONS USER NAME			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Zhejiang University, Hangzhou, PRC	B.S.	1986-1991	Biomedical Engineering
Rutgers, The State University of New Jersey, NJ	M.S.	1995-1997	Biomedical Engineering
Rutgers, The State University of New Jersey, NJ	Ph.D.	1995-2000	Biomedical Engineering

A. Positions and Honors.**Positions and Employment**

1995-2000 Research Assistant, Dept. of Biomedical Engineering, Rutgers University
 2000-2001 Post doctoral Research Fellow, Center for Imaging Research, Rutgers University
 2004-2005 Post doctoral Research Fellow, Imaging Research Center, Cincinnati Children's Hospital
 2005- Research Assistant Professor, Imaging Research Center, Cincinnati Children's Hospital

Other Experience and Professional Memberships

1998-2000 Institute of Electrical and Electronics Engineers (IEEE)
 2005- International Society for Magnetic Resonance in Medicine (ISMRM)

Honors

1995-1996 Marion Johnson Fellowship, Rutgers University
 1999 Award for the Winner of Paper Competition, 25th Northeast Bioengineering Conference, IEEE
 2005- McLaurin Fellowship, Pediatric Brain Imaging Research Program, Cincinnati Children's Hospital

B. peer-reviewed publications.

1. W. Yuan, S. K. Holland, V. J. Schmithorst, N. C. Walz, K. M. Cecil, B. V. Jones, P. Karunanayaka, L. Michaud, S. L. Wade. "Diffusion Tensor MRI Reveals Persistent White Matter Damage after Traumatic Brain Injury Experienced During Preschool Years". (accepted)
2. S. K. Holland, J. Vannest, M. Mecoli, A. W. Byars, L. M. Jacola, P. R. Karunanayaka, V. J. Schmithorst, W. Yuan, E. Plante. "Functional MRI of Language Development and Lateralization in Children". (accepted).
3. P. R. Karunanayaka, S. K. Holland, W. Yuan, M. Altaye, B. V. Jones, L. J. Michaud, N. C. Walz, S. L. Wade "Abnormalities in language circuitry in children with traumatic brain injury: an fMRI study."(Accepted).
4. W. Yuan, S. K. Holland, K. M. Cecil, K. N. Dietrich, S. D. Wessel, M. Altaye, R. W. Hornung, M. D. Ris, J. C. Egelhoff, and B. P. Lanphear. "The Impact of Early Childhood Lead Exposure on Brain Organization: An fMRI Study of Language Function". *Pediatrics*, 2006; 118(3):971-7.
5. W. Yuan, J. Szaflarski, V. J. Schmithorst, M. Schapiro, A. W. Byars, R. H. Strawsburg, S. K. Holland. "fMRI Shows Atypical Language Lateralization in Pediatric Epilepsy Patients". *Epilepsia*, 2006, 48(3):593-600.
6. K. B. Zur, S. K. Holland, W. Yuan, D. I. Choo, "Functional magnetic resonance imaging: contemporary and future use". *Curr Opin Otolaryngol Head Neck Surg*. 2004; 12(5): 374-7.
7. J. L. Semmlow, W. Yuan. "Components of disparity vergence eye movements: application of independent component analysis". *IEEE Trans Biomed Eng*. 2002; 49(8): 805-11.
8. J. L. Semmlow, W. Yuan. "Adaptive modification of disparity vergence components: an independent

- component analysis study." *Invest Ophthalmol Vis Sci.* 2002; 43(7): 2189-95.
9. W. Yuan, J. L. Semmlow, P. Muller-Munoz. "Model-based analysis of dynamics in vergence adaptation". *IEEE Trans Biomed Eng.* 2001; 48(12): 1402-11.
 10. W. Yuan, and J. L. Semmlow. "The Influence of repetitive eye movements on vergence performance." *Vision Res.* 2000; 40(22): 3089-98.
 11. T. L. Alvarez , J. L. Semmlow, W. Yuan, P. Munoz. "Disparity vergence double responses processed by internal error." *Vision Res.* 2000; 40(3): 341-7.
 12. W. Yuan, J. L. Semmlow, and P. Munoz. "Effects of prediction on timing and dynamics of vergence eye movements." *Ophthalmic Physiol Opt.* 2000 Jul; 20(4): 298-305.
 13. W. Yuan, J. L. Semmlow, T. L. Alvarez, and P. Munoz. "Dynamics of the disparity step response: a model-based analysis." *IEEE Trans Biomed Eng.* 1999; 46: 1191-98.
 14. P. Munoz, J. L. Semmlow, W. Yuan, T. L. Alvarez. "Short term modification of disparity vergence eye movements". *Vision Res.* 1999 May; 39(9): 1695-705.
 15. T. L. Alvarez , J. L. Semmlow, W. Yuan, P. Munoz. "Dynamic details of disparity convergence eye movements". *Ann Biomed Eng.* 1999 May-Jun; 27(3): 380-90.
 16. T. L. Alvarez, J. L. Semmlow, W. Yuan. "Closely spaced, fast dynamic movements in disparity vergence". *J Neurophysiol.* 1998 Jan; 79(1): 37-44.
 17. J. L. Semmlow, W. Yuan, T. L. Alvarez. "Evidence for separate control of slow version and vergence eye movements: support for Hering's Law". *Vision Res.* 1998 Apr; 38(8): 1145-52.

C. Research Support

Active:

TITLE: McLaurin Faculty Development Scholarship in Pediatric Brain Imaging and Functional Neurosurgery.

AGENCY: Robert L. and Sarah J. McLaurin Neurosciences Research Fund.

ROLE: Fellow/co-PI

GOAL: Develop and maintain a self-sustained in pediatric neuroimaging research program in neurosurgery at CCHMC that will utilize advanced neuroimaging technologies in functional neurosurgical treatment of children.

PERIOD: July 1, 2005 – June 30, 2010.

TITLE: Quantifying white matter degeneration using diffusion tensor imaging (DTI) in pediatric patients with hydrocephalus

AGENCY: Cincinnati Children's Hospital Trustee's Grant

ROLE: PI

GOAL: Apply DTI technique to quantify WM damage in children with hydrocephalus as well as the WM recovery and the association between WM integrity with neuropsychological outcome

PERIOD: Sept. 1, 2007 – Aug. 31, 2009