

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES  
GRADUATE FACULTY APPLICATION

1. Name: Xiawei Ou
2. UAMS Graduate Program Sponsor: \_\_\_\_\_ Major field: medical imaging/biomedical engineering
3. Present UAMS academic title or administrative position: Associate Professor of Radiology and Pediatrics
- Date appointed this rank/position: 7/1/2017 Employed by: UAMS

4. **Comments of Department Chair/Head or Program Director including: evidence of scholarly development, effectiveness as a teacher, quality of publications and reallocation of duties if this application is approved.**

It is a pleasure to support Dr. Ou's application. I quote here from the summary of my letter to the Promotion and Tenure Committee in support of his successful application for promotion and tenure in 2016:

"We are very fortunate to have among our faculty a person who combines proven, significant research productivity with the provision of vital clinical service, administrative leadership essential to Arkansas Children's Hospital, who brings educational expertise in an area of imaging inaccessible to most."

Study with Dr. Ou will provide his graduate students an opportunity to learn from an investigator with impressive extramural support, successful in several areas. They will also be able to work with that rare basic science researcher whose clinical colleagues consider his support to be indispensable to their clinical work.

The Director of the Division of Pediatric Radiology, Dr. Amy Rowell, and I fully support this endeavor. I trust that you will feel free to contact me if additional information is required.

James E. McDonald, M.D. F.A.C.R.      12/21/17  
Department Chair/Head or Program Director      Date      Graduate Council Representative

I have read the comments of my Department Chair/Head or Program Director and I do, do not (circle one) wish to supply additional information in support of my application.

\_\_\_\_\_  
Applicant's Signature      Date

**Approvals**

\_\_\_\_\_  
Chair, Graduate Faculty Committee      Date

Eric C. Pitt      2-15-2018  
Chair, Graduate Council      Date

Karen Byrnes      2-20-2018  
Dean of the Graduate School      Date

# INSTRUCTIONS FOR COMPLETION OF THE COMPUTERIZED FORM FOR APPLICATION TO THE UAMS GRADUATE FACULTY

1. Please read the form carefully and answer all questions. The form begins on the next page.
2. The form has been designed with fields for your responses, and these are indicated in blue and gray shading. Use the "tab" key to move between fields. The form will automatically expand to accommodate your entries. **IF YOU NEED HELP IN ANY OF THE FIELDS, PRESS THE F1 KEY AND A HELP WINDOW WILL OPEN.**
3. When you have completed the form, save it as a document on your own disk for future reference.
4. Print the document, and then obtain the appropriate signatures before submitting the form to the Graduate Office.

5. **List your planned involvement in graduate education (courses, theses, dissertations):**

Serve as the primary or secondary advisor for PhD students; train and mentor the students so that they can participating in my neuroimaging research projects and make important contributions; ensure the completion and successful defending of their PhD dissertation.

In addition, I am already serving as a guest lecturer for a graduate course "Functional Neuroimaging"

6. **Briefly summarize your experience in graduate-level classroom teaching:**

In 2011-2013, I gave multiple MRI physics lectures per year to Radiology residents who were preparing for board examination. No official student evaluations were documented because of the small sample size, but the feedback I received from the course coordinator was "excellent"

In 2014, 2015, and 2017, I served as a guest lecturer for a graduate level course "functional neuroimaging" at UAMS. My evaluation scores were "course value: 4.44/5.00; course quality: 4.78/5.00)

7. **Briefly summarize your experience in research and student research mentoring:**

I have been an independent research investigator at UAMS since 2008. Currently my research projects are funded by NIH, USDA, and ABI. My research focuses on using advanced pediatric neuroimaging methods (such as diffusion tensor imaging, functional magnetic resonance imaging, etc.) to study brain development in neonates/infants/children related with a number of factors such as maternal obesity, birth mode, infant nutrition, and childhood obesity.

I have mentored a research assistant (who is now a Program Specialist at Arkansas Department of Health), and a visiting scholar (who is now a postdoctoral fellow in another lab) in recent years. I have also mentored some summer science students and helped train a graduate student before.

8. **Attach Curriculum Vita** showing educational background (including institutions attended, degrees awarded and dates), honors or awards received, scholarly or professional organization affiliations, teaching experience (give school, dates and advanced and graduate subjects taught), including student theses and/or dissertations supervised. Cite publications and research in progress.

## Xiawei Ou, Ph.D.

1 Children's Way, Slot 105, Little Rock, AR 72202, USA

Email: [ouxiawei@uams.edu](mailto:ouxiawei@uams.edu)

Phone: (501) 364-4837

### **PROFESSIONAL AND ADMINISTRATIVE APPOINTMENTS**

University of Arkansas for Medical Sciences (UAMS)

Departments of Radiology and Pediatrics	<b>Associate Professor with Tenure</b>	2017 – present
Department of Pediatrics	<b>Assistant Professor (secondary)</b>	2014 – 2017
Department of Radiology	<b>Assistant Professor (primary, tenure-track)</b>	2011 – 2017
Department of Radiology	<b>Research Assistant Professor</b>	2008 - 2011
Arkansas Children's Nutrition Center	<b>Director of the Brain Imaging Laboratory</b>	2014 – present
Arkansas Children's Hospital	<b>MRI Physicist</b>	2008 – present

### **EDUCATION**

Vanderbilt University Department of Physics and Astronomy	<b>Ph.D. in MR Physics</b>	2001 – 2007
Peking University Department of Technical Physics	<b>B.Sc. in Physics</b>	1997 – 2001

### **CLINICAL SERVICE**

Arkansas Children's Hospital, Radiology	<b>MRI Support</b>	2008 – present
-----------------------------------------	--------------------	----------------

*Main Duties:* Develop and implement new MRI methods

Build, review, and update clinical MRI protocols

Perform pre-surgical fMRI and DTI

Help to interpret imaging findings

Troubleshoot MRI equipment and imaging quality related issues

Serve as the MRI Safety Expert, organize safety committee meetings, draft policies, provide training, design quiz, and review compliance

UAMS Department of Radiology	<b>MRI Support</b>	2013 – present
------------------------------	--------------------	----------------

*Main Duties:* pre-surgical fMRI

### **RESEARCH EXPERIENCE**

UAMS Department of Radiology and Pediatrics	<b>Independent Investigator</b>	2008 – present
Arkansas Children's Research Institute	<b>Full member</b>	2008 – present
Arkansas Children's Nutrition Center	<b>Collaborating Scientist</b>	2008 – present
Vanderbilt University Institute of Imaging Science	<b>Research Assistant</b>	2003 – 2007
Washington University in St. Louis, Radiology	<b>Visiting Researcher</b>	2006

### **TEACHING EXPERIENCE**

UAMS College of Medicine	<b>Guest Lecturer, Functional Neuroimaging Course</b>	2014 – 2017
UAMS Department of Radiology	<b>MR Physics Lecturer</b>	2010 – 2013
Vanderbilt University Department of Physics and Astronomy	<b>Lab Instructor</b>	2001 – 2003

Mentoring: Nicole Johnson (research assistant, 2012-2014), Xuehua Li (postdoctoral fellow, 2014-2017), Amjad Samara (Postdoctoral fellow, 2017-)

### **HONORS AND AWARDS**

Winner, FASEB BioArt Competition	2015
Radiology Editor's Recognition Award	2011, 2012
International Society for Magnetic Resonance in Medicine (ISMRM) Seed Grant Award	2011

## **Xiawei Ou, Ph.D.**

---

Marion B. Lyon New Scientist Development Award	2011
Thrasher Research Fund Early Career Award	2011
ISMRRM Educational Stipend Award	2006, 2007
Third prize in Chinese Mathematics Olympiad	1997

### **PROFESSIONAL ACTIVITIES**

<b>Member:</b>	International Society for Magnetic Resonance in Medicine	2004 – present
	The American Association of Physicists in Medicine	2016 – present
<b>Manuscript Reviewer:</b>	Radiology	
	Pediatric Radiology	
	Magnetic Resonance Imaging	
	Journal of Magnetic Resonance Imaging	
	PLOS ONE	
	NMR in Biomedicine	
	Journal of Neuropsychology	
	Journal of Molecular Endocrinology	
	Pediatric Obesity	
	Neuroimaging: Clinical	
	International Journal of Developmental Neuroscience	
	Developmental Neurorehabilitation	
	Brain Imaging and Behavior	
<b>Grant Reviewer:</b>	NIH Early Career Reviewer Program	2015 – present
	US Centers for Disease Control and Prevention (CDC)	2016
<b>Abstract Reviewer:</b>	ISMRRM annual meetings	2009 – present
<b>Committee member:</b>	ISMRRM MRI Safety Committee	2017
	UAMS IRB Data Safety Monitoring Board	2017
	ACH MRI Safety Committee (chair)	2014 – present
<b>UAMS COM admission interviewer</b>		2016
<b>Consultant,</b> Pfizer Nutrition Medical Neuroscience Day		2012

### **CURRENT RESEARCH GRANTS**

- NIH/NIGMS 1P20GM121293 07/01/2017 - 06/30/2022  
"Effects of Maternal Obesity on Offspring Brain Development"  
Role: **Project Leader**
- ABI/ACRI Discovery Acceleration Initiative in Pediatric Medicine 05/01/2017 - 04/30/2019  
"Effects of C-section Delivery on Offspring Brain Development"  
Role: **Principal Investigator**
- NIH/NIGMS 1P20GM109096-01A1 04/27/2017 - 07/31/2018  
"Fibroblast Growth Factor-21: An Adjunct Biomarker for Early Detection of NAFLD in Children"  
Role: **Co-Investigator**
- USDA /ARS 6251-51000-006-00D 09/01/2014 - 08/31/2019  
"Dietary Influences on Psychological and Neuropsychophysiological Development and Function in Children"  
Role: **Co-Investigator**
- ACNC grant support 07/01/2016 - 06/30/2018  
"Brain Imaging Research Laboratory"  
Role: **Principal Investigator**

## Xiawei Ou, Ph.D.

---

### **PAST GRANTS**

- ACNC grant support 07/01/2011 - 06/30/2016  
"Effects of Maternal Obesity and Physical Activity on Offspring Brain Development"  
Role: **Principal Investigator**
- ACRI Mary B. Lyon New Scientist Award 05/01/2011 - 04/30/2014  
"Neuroimaging in Childhood Obesity"  
Role: **Principal Investigator**
- NIH/NIGMS 5P20RR020146-09/8P20GM103425-09 05/01/2012 - 04/30/2014  
"Biomarkers Predicting Early Brain Injury in Neonatal Congenital Heart Disease"  
Role: **Co-Investigator**
- Thrasher Research Fund Early Career Award 02/01/2011 - 01/31/2014  
"Effects of Permissive Hypercapnia on Cerebral White Matter in ELBW Premature Infants"  
Role: **Principal Investigator**
- ISMRM Seed Grant Award 06/01/2011 - 05/31/2013  
"DTI Tractography and fMRI Connectivity Evaluation of Visual and Motor Pathways in ELBW Infants"  
Role: **Principal Investigator**
- USDA/ACNC Brain Power Study 02/01/2017 - 06/30/2011  
"Effects of Neonatal Diet on Language and Neurocognitive Functions Development: an fMRI Study"  
Role: **Co-Investigator**
- UAMS CUMG Grant Award 06/01/2019 - 05/31/2011  
"Evaluation of Cerebral White Matter Injury in Premature Infants by Quantitative MRI Methods"  
Role: **Principal Investigator**
- UAMS CUMG Grant Award 06/01/2008 - 05/31/2010  
"Neurocognitive Activation for Adolescents with Spina Bifida"  
Role: **Co-Investigator**

### **JOURNAL ARTICLES (\*: Corresponding Author)**

- Sean C. Deoni, Sean H. Adams, Xuehua Li, Thomas M. Badger, R.T. Pivik, Charles M. Glasier, Raghu H. Ramakrishnaiah, and **Xiawei Ou\***, Caesarean Section Delivery Impacts Infant Brain Development, *Pediatrics*, 2017 (under review)
- **Xiawei Ou\***, Charles M. Glasier, Raghu H. Ramakrishnaiah, Alisa Kanfi, Amy C. Rowell, R.T. Pivik, Aline Andres, Mario A. Cleves, and Thomas M. Badger, Gestational Age and Brain White Matter Development in Term-Born Infants and Children, *American Journal of Neuroradiology* 2017, DOI: <https://doi.org/10.3174/ajnr.A5408>
- Xuehua Li, Aline Andres, Kartik Shankar, R. T. Pivik, Charles M. Glasier, Raghu H. Ramakrishnaiah, Yilu Zhang, Thomas M. Badger, and **Xiawei Ou\***, Differences in Brain Functional Connectivity at Resting-State in Neonates Born to Obese otherwise Healthy or Normal-Weight Mothers, *International Journal of Obesity* 2016, 40: (1931-1934)
- **Xiawei Ou\***, Aline Andres, R. T. Pivik, Mario A. Cleves, Jeffrey H. Snow, Zhaohua Ding, and Thomas M. Badger, VBM and fMRI Revealed Differences in Brain Grey Matter in Breastfed and Milk Formula Fed Children, *American Journal of Neuroradiology* 2016, 37: (713-719)
- **Xiawei Ou\***, Keshari M. Thakali, Kartik Shankar, Aline Andres, and Thomas M. Badger, Maternal Adiposity Negatively Influences Infant Brain White Matter Development, *Obesity* 2015, 23: (1047-1054)
- **Xiawei Ou\***, Aline Andres, R. T. Pivik, Mario A. Cleves, and Thomas M. Badger, Brain Grey and White Matter Differences in Healthy Normal Weight or Obese Children, *Journal of Magnetic Resonance Imaging* 2015, 42: (1205-1213)

## Xiawei Ou, Ph.D.

- Ryan Fitzgerald, **Xiawei Ou**, J.S. Nix, Melinda Arthur, Aliza Brown, Robert Skinner, Michael Borrelli, and William Culp, Dodecafluoropentane Emulsion Delays and Reduces MRI Markers of Infarction in a Rat Stroke Model: A Preliminary Report, *Magnetic Resonance Imaging* 2015, 33: (236-239)
- Kim M Cecil, Sarah B Mulkey, **Xiawei Ou**, and Charles M Glasier, Brain Ketones Detected by Proton Magnetic Resonance Spectroscopy in an Infant with Ohtahara Syndrome Treated with Ketogenic Diet, *Pediatric Radiology* 2015, 45: (133-137)
- **Xiawei Ou\***, Charles M. Glasier, Rahu H. Ramakrishnaiah, Sarah B. Mulkey, Zhaohua Ding, Teresita Angtuaco, Aline Andres, and Jeffrey R. Kaiser, Impaired White Matter Development in Extremely Low Birth Weight Infants with Previous Brain Hemorrhage, *American Journal of Neuroradiology* 2014, 35: (1983-1989)
- **Xiawei Ou\***, Aline Andres, Mario A. Cleves, R.T. Pivik, Jeffrey H. Snow, Zhaohua Ding, and Thomas M. Badger, Sex-specific association between infant diet and white matter integrity in 8-y-old children, *Pediatric Research* 2014, 76: (535-543)
- Sarah B. Mulkey, **Xiawei Ou**, Raghu H. Ramakrishnaiah, Charles M. Glasier, Christopher J. Swearingen, Maria S. Melguizo, Vivien L. Yap, Michael L. Schmitz, and Adnan T. Bhutta, White Matter Injury in Newborns with Congenital Heart Disease: A Diffusion Tensor Imaging Study, *Pediatric Neurology* 2014, 51: (377-383)
- **Xiawei Ou\***, Charles M. Glasier, Raghu H. Ramakrishnaiah, Teresita L. Angtuaco, Sarah B. Mulkey, Zhaohua Ding, and Jeffrey R. Kaiser, Diffusion Tensor Imaging in Extremely Low Birth Weight Infants Managed with Hypercapnic vs. Normocapnic Ventilation, *Pediatric Radiology* 2014, 44: (980-986)
- Sarah B. Mulkey, Christopher J. Swearingen, Maria S. Melguizo, Michael L. Schmitz, **Xiawei Ou**, Raghu H. Ramakrishnaiah, Charles M. Glasier, G. Bradley Schafer, and Adnan T. Bhutta, Multi-Tiered Analysis of Brain Injury in Neonates with Congenital Heart Disease, *Pediatric Cardiology* 2013, 34: (1772-1784)
- Vaibhav A. Janve, Zhongliang Zu, Song-Yi Yao, Ke Li, Fanglin Zhang, Kevin J Wilson, **Xiawei Ou**, Mark D. Does, Sriram S. Subramaniam, and Daniel F. Gochberg, The Radial Diffusivity and Magnetization Transfer Pool Size Ratio are Sensitive Markers for Demyelination in a Rat Model of Type III Multiple Sclerosis (MS) Lesions, *Neuroimage* 2013, 74: (298-305)
- **Xiawei Ou\***, Jeffrey H. Snow, Amy K. Byerley, John J. Hall, and Charles M. Glasier, Decreased Activation and Increased Lateralization in Brain functioning for Selective Attention and Response Inhibition in Adolescents with Spina Bifida. *Child Neuropsychology* 2013, 19: (23-36)
- Jinxiang Xi, Ariel Berlinski, Yue Zhou, Bruce S. Greenberg, and **Xiawei Ou**, Breathing Resistance and Ultrafine Particle Deposition in Nasal Airways of a Newborn, an Infant, a Child, and an Adult, *Annals of Biomedical Engineering* 2012, 40: (2579-2595)
- Aliza T. Brown, **Xiawei Ou**, Laura P. James, Kedar Jambhekar, Tarun Pandey, Sandra McCullough, and Michael J. Borrelli, Correlation of MRI findings to Histology of Acetaminophen Toxicity in the Mouse. *Magnetic Resonance Imaging* 2012, 30: (283-289)
- **Xiawei Ou\***, Charles M. Glasier, and Jeffrey H. Snow, Diffusion Tensor Imaging Evaluation of White Matter in Adolescents with Myelomeningocele and Chiari II Malformation. *Pediatric Radiology* 2011, 41: (1407-1415)
- **Xiawei Ou**, Shu-Wei Sun, Sheng-Kwei Song, and Daniel Frank Gochberg. Quantitative Magnetization Transfer Measured Pool Size Ratio Reflects Optic Nerve Myelin Content in ex vivo Mice. *Magn. Reson. Med* 2009, 61: (364-371)
- **Xiawei Ou\***, Shu-Wei Sun, Hsiao-Fang Liang, Sheng-Kwei Song, and Daniel Frank Gochberg. The MT Pool Size Ratio and DTI Radial Diffusivity may Reflect the Integrity of the Myelin Sheath in Shiverer and Control Mice. *NMR Biomedicine* 2009, 22: (480-487)
- **Xiawei Ou\***, Daniel Frank Gochberg. MT Effects and T<sub>1</sub> Quantification in Single Slice Spoiled Gradient Echo Imaging. *Magn. Reson. Med* 2008, 59: (835-845)

## **Xiawei Ou, Ph.D.**

---

### **PEER REVIEWED INTERNATIONAL CONFERENCE PROCEEDINGS**

- G. Andrew James, Brad S. Martins, Tonisha E. Kearney-Ramos, **Xiawei Ou**, and Clint Kilts, Functional and structural neuroimaging predictors of normative variance in cognition, Human Brain Mapping 2017
- Xuehua Li, Yilu Zhang, Aline Andres, R.T. Pivik, Charles M. Glasier, Raghu H. Ramakrishnaiah, Thomas M. Badger, and **Xiawei Ou**, Maternal Obesity Affects Offspring's Brain Resting-State Functional Connectivity, Pro. Intl. Soc. Magn. Reson. Med 2016
- **Xiawei Ou**, R.T. Pivik, Aline Andres, Mario A. Cleves, and Thomas M. Badger, Differences in Brain Activation Associated with Infant Diet: An fMRI Study, Pro. Intl. Soc. Magn. Reson. Med 2015
- **Xiawei Ou**, Aline Andres, R.T. Pivik, Mario A. Cleves, and Thomas M. Badger, Childhood Obesity is Associated with Lower Gray Matter Volume in Children, Pro. Intl. Soc. Magn. Reson. Med 2015
- **Xiawei Ou**, Aline Andres, Keshari M. Thakali, Kartik Shankar, and Thomas M. Badger, Maternal Obesity Negatively Affects Offspring's Brain White Matter Development, Pro. Intl. Soc. Magn. Reson. Med 2015
- Fitzgerald RT, Nix JS, Brown AT, Arthur MC, Ou X, Skinner RD, Culp WC, Dodecafluoropentane Emulsion Delays and Reduces MRI Markers of Infarction in a Rat Stroke Model, International Stroke Conference 2014
- R.T. Pivik, A Andres, J H Snow, **Xiawei Ou**, P H Casey, M A Cleves, T M Badger, Semantic memory processing is enhanced in preadolescents breastfed compared to those formula-fed as infants: An ERP N400 study of sentential semantic congruity, The FASEB Journal 2014, 28, 629.1
- **Xiawei Ou**, Raghu Ramakrishnaiah, Charles Glasier, Sarah Mulkey, Zhaohua Ding, and Jeffrey Kaiser, Impaired white matter development in extremely low birth weight infants with previous brain hemorrhage, Pro. Intl. Soc. Magn. Reson. Med 2014
- Sarah B. Mulkey, Christopher J Swearingen, Maria S Melguizo, **Xiawei Ou**, Adanan T Bhutta, Exploring a Profile of Biomarkers for Preoperative Brain Injury in Newborns with Congenital Heart Disease, 2013 Southeast Regional IDeA Meeting
- Zhaohua Ding, **Xiawei Ou**, Ran Xu, Adam W. Anderson, Thomas M. Badger, John C. Gore, Visualization of functional architecture of the human brain using functional tensor images, Human Brain Mapping 2013
- **Xiawei Ou**, Charles M Glasier, Raghu H Ramakrishnaiah, Sarah B Mulkey, Vivien L Yap, and Jeffrey R Kaiser, Increased incidence of intracranial hemorrhage in extremely premature infants treated with hypercapnic ventilation, Pro. Intl. Soc. Magn. Reson. Med 2013
- **Xiawei Ou**, Charles M Glasier, Raghu H Ramakrishnaiah, Sarah B Mulkey, Vivien L Yap, and Jeffrey R Kaiser, DTI is more sensitive to detect effects of hypercapnia on white matter development in ELBW infants than conventional MRI, Pro. Intl. Soc. Magn. Reson. Med 2013
- **Xiawei Ou**, George Andrew James, Zhaohua Ding, Charles M Glasier, Raghu H Ramakrishnaiah, and Jeffrey R Kaiser, Resting State fMRI revealed differences in connectivity to visual cortex in premature infants with hypercapnic ventilation, Pro. Intl. Soc. Magn. Reson. Med 2013
- Sarah B. Mulkey, Christopher J. Swearingen, Maria Melguizo, Michael Schmitz, **Xiawei Ou**, Raghu H. Ramakrishnaiah, Charles M. Glasier, G. Bradley Schaefer, and Adnan T. Bhutta, Biomarkers of Brain Injury in Neonates with Congenital Heart Disease, 2012 ABI Symposium
- Vaibhav Anil Janve, Zhongliang Zu, Song-yi Yao, Ke Li, Fang Lin Zhang, Kevin Wilson, **Xiawei Ou**, Mark Does, Subramaniam Sriram, and Daniel Gochberg. Correlating quantitative magnetization transfer and diffusion tensor imaging with myelin histology in a rat model of type III multiple sclerosis lesions. Pro. Intl. Soc. Magn. Reson. Med 2012
- **Xiawei Ou**, Gregory B. Sharp, Jeffrey H. Snow, and Charles M. Glasier. FMRI and DTI Revealed



## **Xiawei Ou, Ph.D.**

Changes in Contralateral Motor Compensation after Brain Tumor Removal, ISMRM Mapping Functional Networks Workshop 2011

- Vaibhav Janve, Song-Yi Yao, Ke Li, Zhongliang Zu, Asa Rose, Kevin Wilson, **Xiawei Ou**, Subramaniam Sriram, Mark Does, Daniel Gochberg. Correlating High Resolution 3D gMT and DTI with Histological Myelin Content in a LPS Rat Model of MS. *Frontiers in Biomedical Imaging Conference*, 2011
- **Xiawei Ou**, Jeffrey H. Snow, John J. Hall, Amy Byerly, and Charles M. Glasier, An fMRI study of cognitive functions in adolescents with spina bifida. *Pro. Intl. Soc. Magn. Reson. Med* 2011
- **Xiawei Ou**, John J. Hall, Charles M. Glasier, and Jeffrey H. Snow, Diffusion Tensor Imaging Study of Adolescents with Spina Bifida. *Pro. Intl. Soc. Magn. Reson. Med* 2010
- **Xiawei Ou**, Shu-Wei Sun, Daniel Frank Gochberg, and Sheng-Kwei Song. qMT is Specifically Sensitive to Myelin and Not Axonal Injury in Optic Nerve from Mice Undergoing Transient Retinal Ischemia. *Pro. Intl. Soc. Magn. Reson. Med* 2007, (2377)
- **Xiawei Ou**, Shu-Wei Sun, Hsiao-Fang Liang, Daniel Frank Gochberg, and Sheng-Kwei Song. qMT Estimated Pool Size Ratio and DTI Derived Radial Diffusivity Reflect the Integrity of Myelin Sheath in Mice. *Pro. Intl. Soc. Magn. Reson. Med* 2007, (317)
- **Xiawei Ou**, John C. Gore, and Daniel Frank Gochberg. Magnetization Transfer Effects in Single Slice Spoiled Gradient Echo Imaging. *Pro. Intl. Soc. Magn. Reson. Med* 2006, (2496)
- Huairan Zeng, **Xiawei Ou**, Yansong Zhao, Daniel Frank Gochberg, Brian Welch, and John C. Gore. Reducing T2 Blurring in Fast Spin Echo Sequences Using the Point Spread Function. *Pro. Intl. Soc. Magn. Reson. Med* 2006

### **OTHER PUBLISHED ARTICLES**

- "Probing Brain Activity by Functional MRI", ACNC Spring Newsletter, Jan 2012

### **MEDIA REPORTS**

- "DTI-MRI Links Maternal Obesity to Newborn Brain Growth", featured at [www.auntminnie.com](http://www.auntminnie.com), reported by Wayne Forrest, June 26, 2015. Research findings related with this project are also selected by the FASEB to highlight in the "FASEB Congressional Recommendation for Sciences Funding, FY 2017"
- "Early Imaging for Earlier Intervention", featured at ACHRI Research Update, reported by John Gregan, April 2011

### **INVITED PRESENTATIONS**

- "DTI-TBSS: A Useful Neuroimaging Method to Evaluate Neonatal Brain Development", Xinhua Hospital, Shanghai, May 3<sup>rd</sup>, 2017
- "Current progress in DTI/fMRI pre-surgical brain mapping", Arkansas Children's Hospital Neuroscience retreat, Sep 22, 2016
- "Advanced Pediatric Neuroimaging: Methods and Applications", Silk Road Symposium for Distinguished Young Scholars, Xi'an, China, Dec 22, 2015
- "Advanced Pediatric Neuroimaging: Methods and Applications", International Youth Scholars Forum, Sun Yat-sen University, Guangzhou, China, Dec 18, 2015
- "DTI-TBSS: Methods and Applications on Neonatal Neuroimaging", Fudan Children's Hospital, Shanghai, China, Dec 15, 2015
- "The basics of MRI sequences", Myeloma Institute, University of Arkansas for Medical Sciences, April 7, 2015
- "DTI-TBSS: a useful neuroimaging tool to evaluate the brain development in young infants", Pediatric Grand Rounds, Arkansas Children's Hospital, March 31, 2015
- "Diffusion Tensor Imaging and Tract-Based Spatial Statistics: Basics and Applications", East Lake

## **Xiawei Ou, Ph.D.**

---

International Forum, Wuhan, China, Dec 29, 2014

- "DTI TBSS: A Useful Tool to Evaluate White Matter in Infants", Chinese Radiology Society, Changsha, China, June 28, 2014
- "ACR Guidance on MR Safe Practices", Radiology, Arkansas Children's Hospital, Dec 6, 2013
- "Increased incidence of intracranial hemorrhage in extremely premature infants treated with hypercapnic ventilation", ISMRM annual meeting, Salt Lake City, UT, April 22, 2013
- "Advances in Imaging that Describes Brain Function", Pfizer Medical Neuroscience Day, Madison, NJ, Feb 2, 2012
- "DTI and fMRI: Research and Clinical Applications", Pediatric Grand Rounds, Arkansas Children's Hospital, Apr 13, 2010.
- "Magnetic Resonance Imaging Techniques and Applications", Arkansas Children's Hospital Research Institute research conference, Dec 11, 2008.
- "Structural and Functional Magnetic Resonance Imaging", Arkansas Children's Hospital Neurology research retreat, Oct 30, 2008.
- "Diffusion Tensor Imaging Methods and Applications", Arkansas Children's Nutrition Center, Feb 26, 2008
- "Myelin Imaging by quantitative MRI Methods", Peking University, China, Jan 20, 2008
- "QMT Estimated Pool Size Ratio and DTI Derived Radial Diffusivity Reflect the Integrity of Myelin Sheath in Mice", ISMRM annual meeting, Berlin, Germany, May 23, 2007
- "Quantitative Magnetization Transfer Imaging Methods and Techniques". Washington University in St. Louis, Oct 9, 2006