

CURRICULUM VITAE

**Yu-Chien Wu, MD, PhD, DABMP**

**CONTACT INFORMATION**

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**EDUCATION**

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**POSTDOCTORAL**

University of Wisconsin-Madison, USA	Dept. of Radiology	2006-2007
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**GRADUATE**

University of Wisconsin-Madison, USA	PhD in Medical Physics	2001-2006
School of Medicine, Kaohsiung Medical University, Taiwan	MD	1995-2000

**UNDERGRADUATE**

National Taiwan University, Taipei, Taiwan	BS in Physics	1990-1994
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**APPOINTMENTS**

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**Academic**

* In-Vivo Imaging Core, Indiana Institute for Biomedical Imaging Sciences	Director	2019-present
* Roberts Translational Imaging Facility Stark Neuroscience Research Initiative	Director	2019-present
*Dept. of Radiology and Imaging Sciences, Indiana University School of Medicine	Associate Professor, tenured	2019-present
Dept. of Radiology and Imaging Sciences, Indiana University School of Medicine	Assistant Professor	2013-2019
Dept. of Psychological and Brain Sciences & Dartmouth Brain Imaging Center, Dartmouth College, NH, USA	Research Assistant Professor	2009-2013
Dept. of Radiology & Dept. of Medical Physics, University of Wisconsin - Madison, USA	Assistant Scientist	2007-2009

\* in rank activity

### **Non-academic**

Dept. of Radiology, Chang-Gung Memorial Medical Center, Linkou, Taiwan	Medical Resident	2000-2001
Chung-Ho Memorial Hospital, Kaohsiung, Taiwan	Medical Intern	1999-2000

### **LICENSURE, CERTIFICATION, SPECIALTY BOARD STATUS**

National Physician License, Taiwan	No 032444	2000
DABMP, Diplomate, American Board of Medical Physics		2016, renewed 2021

### **PROFESSIONAL ORGANIZATION MEMBERSHIPS**

National Multiple Sclerosis Society (NMSS)	2006-2009
Organization for Human Brain Mapping (OHBM)	2008-2011
American Association of Physicists in Medicine (AAPM)	2013-2017
*International Society for Magnetic Resonance in Medicine (ISMRM)	2003-present
*International Society to Advance Alzheimer's Research and Treatment (ISTAART)	2016-present

### **HONORS AND AWARDS**

Dr. Samuel Ting's Fellowship	Dr. Samuel Ting's Foundation	1990, 1992, 1993
Graduate School Fellowship (declined)	Dept. of Physics, National Taiwan University Taipei, Taiwan	1994
Vilas Travel Fellowship	Graduate Student Collaborative of University of Wisconsin-Madison	2006
Educational Stipend	International Society for Magnetic Resonance in Medicine (ISMRM)	2003, 2005, 2007
<b>Summa cum laude</b> , oral presentation with student	International Society for Magnetic Resonance in Medicine (ISMRM)	2016
<b>Magna cum laude</b> , oral presentation with student	International Society for Magnetic Resonance in Medicine (ISMRM)	2017
* <b>Magna Cum Laude</b> , oral presentation with student	International Society for Magnetic Resonance in Medicine (ISMRM)	2019
*3 <sup>rd</sup> place, poster presentations with student, Diffusion Study Group	International Society for Magnetic Resonance in Medicine (ISMRM)	2019
*Showalter Scholar	Indiana University School of Medicine	2021-2024

### **PROFESSIONAL DEVELOPMENT**

5 <sup>th</sup> Bi-annual High Field Imaging & Spectroscopy Workshop	University of Minnesota, USA	October 2005
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Educational Program	International Society for Magnetic Resonance in Medicine (ISMRM)	May 2003, May 2007
Sequence Development Course for MRI	Philips Healthcare	August 2009
Pulse Programming Course MRI	Philips Healthcare	September 2009
IDEA Sequence Programming for MRI	Siemens Healthcare	January 2014
Imaging Calculation Environments for MRI	Siemens Healthcare	February 2014
American English for International Professionals Program	Indiana University School of Medicine (IUSM)	August – October 2014
Scientific Writing from the Reader's Perspective	IUPUI-OFAPD <sup>†</sup>	August 2014
Writing Winning Grants Proposals	IUPUI-OFAPD <sup>†</sup>	September 2015
Promotion & Tenure Information Session: Excellence in Research	IUPUI-OFAPD <sup>†</sup>	February 2016
Dossier Preparation Workshop	IUPUI-OFAPD <sup>†</sup>	November 2016
Negotiating the Divide: The Trend of Men Earning More than Women: Earn What You Deserve	IUPUI-OFAPD <sup>†</sup>	April 2017
*Unlocking your Inner Mentor Series	IUPUI-OFAPD <sup>†</sup>	October 2020

<sup>†</sup> Indiana University-Purdue University Indianapolis (IUPUI), Office of Faculty Affairs and Professional Development (OFAPD)

## TEACHING

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### GRADUATE

<i>Course #</i>	<i>Title</i>	<i>Role</i>	<i>Contact hours</i>	<i>Term/Date</i>	<i>Enrollment</i>
MP710	Advances in MRI, Diffusion MRI	Guest Lecturer	2	F2007	5
MP710	Advances in MRI, Diffusion MRI	Guest Lecturer	2	F2008	5
MRI Journal Club <sup>†</sup>	Short Axis EPI sequence	Guest Lecturer	1	2014 May	10
CfN Roundtable <sup>†</sup>	Diffusion MRI Q&A	Guest Lecturer	1	2015 May	10
MRI Journal Club <sup>†</sup>	NODDI technique	Guest Co-Lecturer	1	2015 Jan	10
CfN Roundtable <sup>†</sup>	Fieldmap correction	Guest Lecturer	1	2015 Jan	10
MRI Journal Club <sup>†</sup>	MUSE sequence	Guest Co-Lecturer	1	2015 May	10
N715	Neuroanatomy Module, Diffusion MRI	Guest Lecturer	1	F2016 Dec.	7
D527	Neuroanatomy, MRI of the Brain	Guest Lecturer	1	S2017 Feb.	16
D527	Neuroanatomy, MRI of the Brain	Guest Lecturer	1	S2018 Jan.	20
MRI 101 <sup>†</sup>	MRI 101	Organizer and Lecturer	9	F2017- S2018	28

*D527	Neuroanatomy, MRI of the Brain	Guest Lecturer	1	S2019 Jan.	20
*D527	Neuroanatomy, MRI of the Brain	Guest Lecturer	1	S2020 Feb.	20
*D527	Neuroanatomy, MRI of the Brain	Guest Lecturer	1	S2021 Feb.	25
*D527	Neuroanatomy, MRI of the Brain	Guest Lecturer	1	S2022 Feb.	20

**Acronyms:** **CfN:** Center for Neuroimaging; **EPI:** echo planar imaging; **MRI:** magnetic resonance imaging; **NODDI:** neurite orientation dispersion and density imaging.

<sup>†</sup> Unofficial courses organized by a faculty member(s) at Indiana University School of Medicine (IUSM). These courses provided ad hoc education to faculty members, staff, postdoctoral fellows, data analysts, research assistants, graduate students, and undergraduate students from IUSM, Indiana University Bloomington, and Purdue University.

## **MENTORING**

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### **VISITING SCHOLAR**

Xuehua Li	Radiologist	2019-2020	Mentor
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### **ROTATING RESIDENTS**

Xuandong Zhao	Medical Physics, MRI Neuroimaging	2016 Sep.-Oct.	Mentor
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### **POSTDOCTORAL FELLOWS**

Ameer P. Hosseinbor	Medical Physics	2013-2015	Graduate research advisor
Chandana Kodiweera	MRI Physics and Imaging Analysis	2012-2015	Mentor
Sourajit M. Mustafi	Imaging Analysis	2014-2018	Mentor
*Qiuting Wen	MRI Physics and Imaging Analysis	2015-2020	Mentor
*Nahla Elsaid	MRI Physics and Imaging Analysis	2017-2019	Mentor
*Salman Shahid	MRI Physics in Animal Imaging and Imaging Analysis	2020-present	Mentor
*Shawn Yang	Imaging analysis	2020-present	Mentor
*Ghina Zia	Imaging analysis	2021-present	Mentor
*Tayyebah Ebrahimi	MRI Physics and Imaging Analysis	To join 2022 Dec.	Mentor
*Ahana Priyanka	Imaging analysis & Machine Learning	To join 2023 Jan	Mentor

### **GRADUATE STUDENTS**

Pouria Mossahebi	Medical Physics, UW-Madison	2007-2009	Graduate research advisor
Ameer P. Hosseinbor	Medical Physics, UW-Madison	2008-2013	Graduate research advisor
Justin Kim	Psychological and Brain Sciences, Dartmouth College	2009-2011	Graduate research advisor

*D. Katharine Andrews	Medical Scientist Training Program, SNRI	2015-2019	Graduate research advisor
*Cecily Gwinn Swinford	Medical Neuroscience Program, SNRI	2018-present	Graduate research advisor
*Lauren Price	Medical Neuroscience Program, SNRI	2019-present	Graduate research advisor
*Fiona JinXia Yao	Biomedical engineering, Purdue Univ.	2020-2022	CTSI Mentor

#### **MD-PhD STUDENTS**

Adam Wright	MRI Neuroimaging	2022 Apr-present	Graduate research advisor
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#### **MEDICAL STUDENTS**

*Billy Chien	Medicine	2020-2021	IMPRS Summer intern mentor
*Zack Hall	Medicine	2020-2021	IMPRS Summer intern mentor
*Clayton Taylor	Medicine	2020	Research rotation mentor
*Bradley Atoa	Medicine	2021	Research rotation mentor
*Casey Wendorff	Medicine	2021	Research experience
*Michael McGill	Medicine	2021	IMPRS Summer intern mentor
*Luis A. Ramirez	Medicine	2022	IMPRS Summer intern mentor
*Camilo Aguilar	Medicine	2022	Research experience

#### **THESIS COMMITTEES FOR GRADUATE STUDENTS**

D. Katharine Andrews	Medical Scientist Training Program	2015-2019	Committee member
*Cecily Gwinn Swinford	Medical Neuroscience Program	2018-present	Committee member
*Lauren Price	Medical Neuroscience Program	2020-present	Committee member
*Ho-Ching Yang	Biomedical Engineering, Purdue University	2020-2021	Committee member

#### **B.S. RESEARCH ASSISTANTS**

Brian D. Stirling	Dartmouth Brain Imaging Center	2012-2014	Mentor
Long Sha	Dartmouth Brain Imaging Center	2013	Research advisor
Leah Moravec	Indiana University, Center for Neuroimaging	2014-2015	Research advisor
Gandhi K. Pratik	Indiana University, Center for Neuroimaging	2015-2016	Research advisor
Scott Persohn	Indiana Institute for Biomedical Imaging Sciences	2016-2017	Research advisor
*Rhea Thukral	Indiana University School of Medicine	2019-2021	Mentor

#### **UNDERGRADUATE STUDENTS**

Callen R. Gordon	Electrical Engineering	2006-2007	Undergraduate research advisor
Matthew J. Scharrer	Biomedical Engineering	2006-2007	Undergraduate research advisor
Yuan Shangguan	Dartmouth College, Thayer School of Engineering	2012	undergraduate summer research advisor
Kaitlyn Stickle	Women in Science Internship, Neuroscience	2014	Undergraduate summer research advisor

## **TEACHING ADMINISTRATION AND CURRICULUM DEVELOPMENT**

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2018 Stark Neurosciences Research Institute, Medical Neurosciences Graduate Program restructuring working group.

## **GRANTS**

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### **ACTIVE**

<b><i>Title</i></b>	<b><i>Agency</i></b>	<b><i>Role</i></b>	<b><i>Dates</i></b>
*R01 NS112303-01 Comprehensive White-Matter Microstructure-Informed Analytical Methods to Elucidate Neurobiological Mechanisms of Sports-Related Concussion	NIH-NINDS	PI	4/15/20-3/31/25
*R01 NS112303-03S1 Elucidating Pathophysiological Mechanisms of Alzheimer's Disease Using White-Matter Microstructure-Informed Subject-Specific Analytical Methods	NIH-NINDS/NIA	PI	4/1/22-3/31/23
*R01 AG053993 Modeling Axonal Density and Inflammation-Associated Cellularity in Alzheimer's Disease Using Hybrid Diffusion Imaging	NIH-NIA	PI	NCE 8/15/16-5/31/23
*Identifying Microstructural Imaging Biomarkers that Predict Post-Traumatic Headache	Indiana State Department of Health	PI	7/1/21-6/30/23
* R21AG068962 (PI: Tong, Purdue University) Image-Based Modeling of Biomechanical Factors for Risk Assessment of Developing Periventricular White Matter Hyperintensities	NIH-R21	Site-PI	5/15/21-4/30/23
* U54 Research Project (PI: Bruce Lamb) Model-AD	NIH-NIA	Co-I	12/1/22-11/30/27
*R01AG022304-15S1 (PI: Rao, Cleveland Clinic; Site PI: Lamb) Immune Mechanisms Underlying the Neuroprotective Effects of Physical Activity in Human and Mouse Models of Genetic Risk for Alzheimer's Disease	NIH-NIA	Co-I	7/15/21 – 5/31/22
*P30 AG072976 (PI: Saykin) Indiana Alzheimer Disease Research Center	NIH	Co-I	7/1/21- 6/30/26

*R56 AG047992-07A1 (PI: Newhouse, Vanderbilt University; Site PI: Saykin) Long-Term Nicotine Treatment of Mild Cognitive Impairment	NIH	Co-I	2/17/22 – 1/31/23
*R01 AG019771 (PI: Saykin) Memory Circuitry in MCI and Early Alzheimer's Disease Prodrome: Molecular Drivers	NIH	Co-I	NCE 6/1/17-5/31/23
*W81XWH1820047 and HU001-18-2008 (PI: McAllister) Characterizing Potential Chronic Brain Health Effects of Concussion and Repetitive Head Impact Exposure: The CARE-SALTOS Integrated (CSI) Study	U.S. ARMY MTEC & NCAA	Co-I	9/15/21- 6/30/26
* R01 (PI: Dams-O'Connor; Site PI: Hammond) Clinical & biological signatures of post-traumatic neurodegeneration: Leveraging the TBI Model Systems of Care to accelerate in vivo diagnosis of the late effects of TBI (LETBI)	NIH	Co-I	07/01/22-06/30/27
*R01AG061788 (PI: Risacher) Multi-Domain Sensory Measures as Biomarkers of Alzheimer's Disease in Preclinical and Prodromal Stages	NIH	Co-I	2/15/19-11/30/23

## **PENDING**

<b><i>Title</i></b>	<b><i>Agency</i></b>	<b><i>Role</i></b>	<b><i>Dates</i></b>
*R01 NS112303 Supplement Comprehensive Microstructure-Informed Analytical Methods to Elucidate Mechanisms of Post-traumatic Headache in Sports-Related Concussion (SRC)	NIH-NINDS	PI	4/1/23 – 3/31/24
* STTR Phase II (PI: Matthews at ADM Diagnostics, Inc.) Multi-modal Machine Learning Detection and Tracking of Traumatic Brain Injury Neurodegeneration and Its Differentiation from Alzheimer's Disease	NINDS through ADM Diagnostics, Inc	Site-PI	12/01/22-11/30/24
*R01 (PI: Verma, University of Pennsylvania) Neuroimaging Markers of MTBI	NIH-NINDS	Site-PI	07/01/23 - 06/30/28
*R21 (PI: Rayz, Purdue University) Measuring cerebrospinal fluid flow to inform Alzheimer's Disease using magnetic resonance imaging enhanced by physics-constrained neural networks	NIH-NIA	Site-PI	4/01/23-3/31/25
* STTR Phase I (PI: Lee at IrNex, Inc.) Fast Biomarker Imaging for Early Detection of Neoadjuvant Chemotherapy Response in Triple Negative Breast Cancer (TNBC) using pi-SelMQC Methods	NIH	Co-I	04/01/23- 03/31/24
*R01 (PI Wang at Univ Maryland; Site PI: Risacher) Deep-Learning Enhanced ASL MRI For Early AD Assessment	NIH	Co-I	07/01/26- 6/30/28
* R03 (PI: Radhakrishnan) Neuroimaging in Pregnancy to Assess Effects of Opioid Use Disorder	NIH	Co-I	04/01/23 - 03/31/24

*DoD (PI: Risacher) Retinal Measures for the Early Detection of Neurodegeneration in Older Veterans and Civilians with Mild to Moderate Traumatic Brain Injury	DoD	Co-I	10/01/23 - 09/30/26
*R01 (PI: Hulvershorn) Mechanisms of Adolescent Suicide Risk and Visualization of Etiology in a Longitudinal Study of Bipolar-Disorder Families (MARVEL-BD)	NIH	Co-I	07/01/23 - 06/30/28

## **COMPLETED**

<b><i>Title</i></b>	<b><i>Agency</i></b>	<b><i>Role</i></b>	<b><i>Dates</i></b>
*Tau propagation and white matter degeneration in early stages of Alzheimer's disease	IADC, Pilot Project	PI	7/1/20-6/30/21
*Research Contract Diffusion MRI	Siemens	PI	5/1/2018-9/30/21
*Combing the perfusion, function and structure matrices of the brain to assess the spectrum of Alzheimer's disease (PI: Tong)	CTSI-iADC pilot	Site-PI	7/15/20-6/30/22
*U01 AG072177 (PI: Saykin) Korean Brain Aging Study, Longitudinal Endophenotypes and Systems Biology	NIH-NIA	Co-I	9/15/21- 6/30/22
*R01 AG047992 (PI: Newhouse; Site PI: Saykin) Long-Term Nicotine Treatment of Mild Cognitive Impairment	NIH	Co-I	9/15/15- 5/31/22
*R01 AG052439 (PI: Clark) MIND Food and Speed of Processing Training in Older Adults with Low Education, The MINDSpeed Alzheimer's Disease Prevention Pilot Trail	NIH	Co-I	7/15/17-5/31/22
*R21AG066135 (PI: Yan) Gene Co-expression Underlying the Connectomic Alterations in Alzheimer's Disease	NIH-NIA	Co-I	9/15/19-5/31/22
*U01 MH109977 (PI: Shenton; Site PI: Breier) Human Connectome Project for Early Psychosis	NIH	Co-I	4/1/16-10/31/21
*W81XWH-14-2-0151 (PI: McAllister) Concussion Assessment, Research and Education Consortium for sport-related concussion and military personnel	DoD+NCAA	Co-I	9/15/18-9/14/21
*R01 EB022574 (PI: Shen; Site PI: Saykin) Integrative Bioinformatics Approaches to Human Brain Genomics and Connectomics	NIH	Co-I	8/1/16-4/30/21
*P30 AG010133 (PI: Saykin) Indiana Alzheimer Disease Center	NIH	Co-I	7/1/11- 6/30/21
*R01HD096800 (PI: Radhakrishnan) Effects of opioid use disorder in pregnancy on long-term maternal and child outcomes	NIH	Co-I	9/15/18-6/30/20
*ARRS Scholarship (PI: Radhakrishnan)	ARRS	Co-I	4/1/18-3/31/20



Predicting neurodevelopmental outcomes in neonatal abstinence syndrome				
*Improving functional ability in chronic TBI with intensive rehabilitation robotic gait training (PI: Massie)	Indiana Spinal Cord & Traumatic Brain Injury Research Fund	Co-I	7/1/17-6/30/19	
*Data Research/Pilot Study Project Effects of an 8-day advanced meditation, Samyama on physical, psychological and spiritual wellbeing, and associated neural mechanisms (PI: Sadhasivam)	IU-Health	Co-I	3/1/18-2/28/19	
CTR (PI: Wu) Microstructure Modulated White Matter Connectivity for Mild Traumatic Brain Injury	CTSI	PI	7/1/16-6/30/18	
R21 NS075791 (PI: McAllister & Wu) HYBRID Diffusion Imaging to Detect Acute White Matter Injury After Mild TBI	NIH/NINDS-Dartmouth	MPI	9/1/11-8/31/15	
High Angular Resolution Diffusion Imaging (HARDI) with novel HYPR image reconstruction (PI: Wu)	Dartmouth SYNERGY	PI	8/1/12-7/31/15	
Hybrid Diffusion Imaging (HYDI) of the Kidney (PI: Wu)	IUPUI-RITDP	PI	7/1/15-6/30/16	
Microstructure Imaging of the Human Brain with TBI (PI: Wu)	IUPUI-ITDP	PI	1/1/15-10/31/16	
Measuring Axonal Diameters and Density with a Novel ActiveAx and Fast RSA-EPI Sequence (PI: Wu)	IADC, Pilot Project	PI	7/1/14-6/30/16	
UH3TR000955-S1 (PI: Shenton at Harvard Medical School; Site PI: Breier) The Efficacy and Safety of a Selective Estrogen Receptor Beta agonist (LY500307) for Negative Symptoms and Cognitive Impairment Associated with Schizophrenia	NIH	Co-I	6/1/16-5/31/18	
R21 AG051932 (PI: Callahan) Angiogenesis and Alzheimer's Disease	NIH	Co-I	5/1/16- 4/30/18	
W81XWH-14-2-0151 (PI: McAllister) Concussion Assessment, Research and Education Consortium (CARE)	NCAA-DoD	Co-I	9/15/14-9/14/18	
R01 MH080716-04S1 (PI: Whalen) Prefrontal-Amygdala Interactions in Social Learning	NIH	Co-I	9/27/10-5/31/11	
Advancing the Understanding of Biomechanical Parameters Associated with Mild Traumatic Brain Injury (PI: McAllister)	NOCSAE	Co-I	6/1/11- 2/30/13	
R01 MH091100-A1 (PI: Holzheimer) Investigating Biomarkers of TRD Using Neuroimaging	NIH	Co-I	9/1/11-11/30/13	
R01 MH080716 (PI: Whalen) Prefrontal-Amygdala Interactions in Social Learning	NIH	Co-I	2/1/12-11/30/13	
Advanced MRI Evaluation of Cerebral Blood Flow and Brain Connectivity Biomarkers in Adolescent Subacute Sports-related Concussion (PI: McDonald)	Ninesigma, Inc.	Co-I	5/1/14-4/30/15	
UH3TR000955 (PI: Breier) The Efficacy and Safety of a Selective Estrogen Receptor Beta agonist (LY500307) for Negative Symptoms and Cognitive Impairment Associated with Schizophrenia	NIH	Co-I	10/1/14-5/31/16	

Improved accuracy for anatomical mapping and network structure of the Alzheimer's brain. (PI: Pestilli)	CTSI-GLUE	Co-I	9/1/15-8/31/17
Dissection of Cholestatic Itch in Primary Biliary Cirrhosis (PI: Chalasani)	Intercept Pharmaceuticals	Co-I	11/01/15-10/19/17
Evaluation of Resting State fMRI in Neonates with Hypoxic-Ischemic Injury (PI: Kralik)	radPDT	Co-I	12/01/16-11/30/17

## INVITED PRESENTATIONS

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### LOCAL

<i>Title</i>	<i>Organization</i>	<i>Date</i>
Quantitative Analysis of Diffusion Tensor Orientation	Dept. of Biostatistics & Medical Informatics, UW-Madison	March 2004
Hybrid Diffusion Imaging	Waisman Laboratory for Brain Imaging and Behavior	August 2005
Diffusion MRI: Tensors and Beyond	Dept. Medical Physics, UW-Madison	April 2006
32 Channel Head Coil	Dartmouth Brain Imaging Center	December 2010
RSA	Indiana Institute for Biomedical Imaging Sciences – AirTD program <sup>†</sup>	January 2015
Diffusion MRI: Applications in Neuroimaging	Suds & Science, Dept. Radiology and Imaging Sciences	January 2018
*rsfMRI in primary biliary cholangitis (PBC) using the MELODIC ICA approach	Gastroenterology Seminar	November 2019
*Association Patterns between Tau Depositions and White-Matter Microstructural Metrics	Dept. Neurology mini symposium: Untangling the Tauopathy of Alzheimer's Disease: Focus on Molecular Imaging	March 2019
*MR Neuroimaging	Stark Neuroscience Research Institute	Nov. 19, 2020
*Tau PET imaging: partial volume correction	Center of Neuroimaging	July 10, 2020
*Imaging Synaptic density	BRTC Seminar	April 13, 2021
*In-Vivo Imaging Core	IU President Whitten's tour	Sept. 16, 2021
*MRI neuroimaging in AD	SNRI P01 committee	Nov. 10, 2021

<sup>†</sup>**AirTD:** Advanced Imaging Research & Technology Development Program

### REGIONAL

<i>Title</i>	<i>Organization</i>	<i>Date</i>
Diffusion MRI: Fundamentals and Applications in Neuroimaging	Dept. PBS, IU-Bloomington	April 2014
Microstructural Imaging	Hackathon, Dept. PBS, IU-Bloomington	November 2015
High resolution diffusion magnetic resonance imaging	4 <sup>th</sup> Indiana Neuroimaging Symposium	November 2016
*Diffusion MRI in Alzheimer's Disease	IADC Research Symposium	October 2018

*Multimodal analysis of tau distribution on AV1451 PET and white-matter fiber tracts	IU Network Institute, Multiomics Retreat	December 2018
*Positron Emission Tomography (PET) for Molecular Imaging	CTSI Access Technology Program Seminar Series	May 28, 2021
*Roberts Translational Imaging Facility	SNRI Summer Cores Seminar Series	July 29, 2021
*Diffusion MRI: Fundamentals and Applications in Neuroimaging	Dept. Biomedical Engineering, Purdue University	March, 2022
*In-Vivo Imaging Core	CTSI Access Technology Program Seminar Series	March, 2022

## **NATIONAL**

### **Invited Talks**

<b><i>Title</i></b>	<b><i>Organization</i></b>	<b><i>Date</i></b>
Acute White Matter Abnormalities in Sport-related Concussion: A DTI Study	NCAA-DoD Concussion Assessment, Research and Education (CARE) Consortium Investigator meeting	November 2016
Diffusion MRI: Fundamentals and Applications in Neuroimaging	University of Illinois at Chicago	March 2017
Diffusion MRI: Fundamentals and Applications in Neuroimaging	Duke University	November 2017
Longitudinal and Sex Effects in Sports-Related Concussion	CARE consortium, Advanced Research Core (ARC) MRI Core Planning Meeting	February 2018
*Effects of White-Matter Tract Length in Acute Sports-Related Concussion	CARE consortium investigator meeting	February 2019
*Association Between Acute MRI, Recovery, and RTP	CARE consortium investigator meeting	February 2020
*Longitudinal white-matter abnormalities in sports-related concussion	Michigan Concussion Center Journal Club	September 2020
*Diffusion MRI: Fundamentals and Applications in Neuroimaging	Mayo Clinic	March 2022
*Diffusion tensor imaging of concussion: A longitudinal analysis.	Fifth Annual NCAA-DoD Grand Alliance Concussion Conference	April 2022
*Diffusion MRI: Fundamentals and Applications in Neuroimaging	University of Wisconsin-Madison	April, 2023

## **INTERNATIONAL**

### **Invited Talks**

<b><i>Title</i></b>	<b><i>Organization</i></b>	<b><i>Date</i></b>
MR Diffusion Imaging	Taipei Veterans General Hospital, Taipei, Taiwan	December 2005
MR Diffusion Imaging	Dept. of Medical Imaging and Radiology Science, Chang Gung University, Taiwan	January 2006

Diffusion MRI and Fiber Orientation Function	The 2 <sup>nd</sup> International Neural Computation Workshop, Dartmouth, NH USA	August 2012
Diffusion MRI: Fundamentals and Applications in Neuroimaging	The 2017 IISA International Conference on Statistics Hyderabad, India	December 2017

*The acceptance rate for oral presentations at the annual conference of International Society of Magnetic Resonance in Medicine (ISMRM) is approximately 15%; The poster acceptance rate is approximately 55% out of approximately 8000 submitted abstracts.*

#### **Oral Presentation**

<b>Title</b>	<b>Organization</b>	<b>Date</b>
Hybrid Diffusion Imaging (HYDI) in a Brain Model of Dysmyelination	International Society of Magnetic Resonance in Medicine Hawaii, USA	April 2009
Rotating Short-Axis EPI “blades” as veering diffusion gradient directions with composite reconstruction (RSA)	International Society of Magnetic Resonance in Medicine Milano, Italy	May 2014
“Windowed” Composite Reconstruction Improves Rotating Short-Axis High Resolution DWI (RSA-DWI) in both Simulation and Human data	International Society of Magnetic Resonance in Medicine Singapore	May 2016
Axonal Density Associated with Cognitive Change Index in Older Adults with Subjective Cognitive Decline (SCD)	Alzheimer’s Association International Conference (AAIC) London, UK	July 2017
Acute white matter abnormalities in sport-related concussion: A DTI study	Military Health System Research Symposium Orlando, FL. USA	August 2017
Characterizing Axonal Density and Tract-Specific Changes Shortly after Mild Traumatic Brain Injury Using Diffusion MRI	21th Symposium Neuroradiologicum, Neuroradiological Society of Taiwan	March 2018
*Longitudinal associations between blood biomarkers and white-matter MRI in sport-related concussion: A study of the NCAA-DoD CARE Consortium	International Society of Magnetic Resonance in Medicine London, UK	May 2022

#### **Oral Presentation (last author)**

<b>Title</b>	<b>Organization</b>	<b>Date</b>
Improving angular resolution in multi-shot turbo spin-echo imaging using rotating single-shot acquisition (RoSA)	International Society of Magnetic Resonance in Medicine Hawaii, USA	April 2017
Acute white matter abnormalities in sport-related concussion: A DTI study	International Society of Magnetic Resonance in Medicine Hawaii, USA	April 2017
White matter changes and correlations with cognitive functions in semi-acute mild traumatic brain injury (mTBI): A hybrid diffusion imaging study	International Society of Magnetic Resonance in Medicine Hawaii, USA	April 2017

*Tau Propagation Pattern Is Evidenced Through Associations with Structural Tract Alterations: A Data Driven Approach	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Diffusion Tensor Imaging Biomarkers for Chronic Pain Following Mild Traumatic Injury	International Society of Magnetic Resonance in Medicine London, UK	May 2022
*Assessment of Pulsatile Cerebrospinal Fluid Dynamics of the Human Brain using Cardiac-cycle Resolved Diffusion-weighted Imaging (CARDI)	International Society of Magnetic Resonance in Medicine London, UK	May 2022

#### Poster presentations

<i>Title</i>	<i>Organization</i>	<i>Date</i>
Age and Gender Related Changes of Human Brains Using Magnetic Resonance Hybrid Diffusion Imaging (HYDI)	International Society of Magnetic Resonance in Medicine Hawaii, USA	April 2009
High Angular Resolution Diffusion Imaging (HARDI) with Highly Constrained Back Projection Reconstruction (HYPR)	International Society of Magnetic Resonance in Medicine Stockholm, Sweden	May 2010
Quantitative Evaluation of Rotating Short-Axis (RSA) EPI for High Spatial Resolution Diffusion MRI	International Society of Magnetic Resonance in Medicine Toronto, Canada	June 2015
*White-Matter Abnormalities in Sport-Related Concussion: A Longitudinal Study of Diffusion Magnetic Resonance Imaging from the NCAA-DoD CARE Consortium	Military Health System Research Symposium Orlando, FL. USA	August 2018
*Longitudinal White-Matter Abnormalities in Sports-Related Concussion: A Study of Diffusion Magnetic Resonance Imaging from the NCAA-DoD CARE Consortium	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Effects of Tract Length in White Matter Alterations After Sports-Related Concussion: A Diffusion MRI Study from the NCAA-DoD CARE Consortium	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Effects of Track Length on White-Matter Abnormalities in Mild Traumatic Brain Injury	Organization for Human Brain Mapping Rome, Italy	June 2019

#### Poster Presentation (last author)

<i>Title</i>	<i>Organization</i>	<i>Date</i>
Hybrid Diffusion Imaging (HYDI) of Acute Mild Traumatic Brain Injuries (mTBI): A Comparison of Diffusion Measures between DTI, PDF and NODDI	International Society of Magnetic Resonance in Medicine, Diffusion Workshop. Podstrana, Croatia	October 2013
Age and Gender - Related Changes in the Normal Human Brain Using Hybrid Diffusion Imaging (HYDI) with Neurite Orientation Dispersion and Density Imaging (NODDI) Analysis	International Society of Magnetic Resonance in Medicine Milano, Italy	May 2014
Automated Segmentation of the Human Amygdala using High Angular Diffusion Imaging (HARDI) and Spectral k-means Clustering	International Society of Magnetic Resonance in Medicine Milano, Italy	May 2014

Neurite orientation dispersion and density Imaging (NODDI) in Multiple Sclerosis	International Society of Magnetic Resonance in Medicine Toronto, Canada	June 2015
NODDI Measures Appear to be Sensitive to Both Age and Gender	International Society of Magnetic Resonance in Medicine Toronto, Canada	June 2015
HYbrid Diffusion Imaging to Detect Acute White Matter Injury After Mild TBI	International Society of Magnetic Resonance in Medicine Singapore	May 2016
Magnetic Resonance Diffusion Tensor and q-space imaging in an Animal Model of Chronic Kidney Disease	International Society of Magnetic Resonance in Medicine Singapore	May 2016
Comparing the LPCA and MPPCA denoise approaches for diffusion MRI using human data simulation	International Society of Magnetic Resonance in Medicine Hawaii, USA	April 2017
Rotating Single-shot Acquisition (RoSA) combined with parallel imaging for fast high-resolution diffusion imaging	International Society of Magnetic Resonance in Medicine. Hawaii, USA	April 2017
*Intravoxel Incoherent Motion (IVIM) Fingerprinting	International Society of Magnetic Resonance in Medicine. Paris, France	June 2018
*Effects of Track Length on White Matter Alterations in Mild Traumatic Brain Injury	International Society of Magnetic Resonance in Medicine. Paris, France	June 2018
*White-Matter Microstructure in Early Stage Alzheimer's Disease	Alzheimer's Association International Conference (AAIC) Chicago, USA	July 2018
*Alterations in White-Matter Diffusion Metrics in Preclinical Alzheimer's Disease: A Subject-Specific Analysis	Alzheimer's Association International Conference (AAIC) Chicago, USA	July 2018
*Super-Resolution Hybrid Diffusion Imaging (SR-HYDI)	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Super-Resolution Diffusion Imaging using Deep Learning: A Feasibility Study	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Golden-Angle Rotating Single-Shot Acquisition (GA-RoSA) for Simultaneous High-Resolution DTI and IVIM	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Diffusion magnetic resonance imaging in the human hippocampal subfields using super-resolution HYDI	International Society of Magnetic Resonance in Medicine Montreal, Canada	May 2019
*Genetic and Structural Network Contributions to The Regional Vulnerability of Tauopathy	Alzheimer's Association International Conference (AAIC) San Diego, USA	July 2022
*Role of neurochemistry in amyloid pathology using 5xFAD transgenic mouse model of AD: A single-voxel Magnetic Resonance Spectroscopy (MRS) study	Alzheimer's Association International Conference (AAIC) San Diego, USA	July 2022

## SERVICE

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### DEPARTMENT

<b>Organization</b>	<b>Activity (times)</b>	<b>Role</b>	<b>Dates</b>
Center for Neuroimaging	Data analyst/specialist recruitment (5x)	Interviewer	2017
*Dept. of Radiology and Imaging Sciences	Faculty recruitment (3x)	Interviewer	2016, 2017, 2020
*Dept. of Radiology and Imaging Sciences	monthly faculty meeting	Faculty member	2013-present
*Diagnostic Medical Physics team	Bi-weekly meeting	Member	2017-present
*Medical Physics Residence Program	Commission on Accreditation of Medical Physics Education Programs (CAMPEP)	Faculty member	2016-present
*Dept. of Radiology and Imaging Sciences	Medical Physics resident recruitment (12x)	Interviewer	2018, 2019
*Dept. of Radiology and Imaging Sciences, Dr. Yoder	Research Scientist recruitment	Member of the search committee	2018
*Center for Neuroimaging	Postdoctoral fellow recruitment	Interviewer	2018
*Dept. of Radiology and Imaging Sciences	Faculty recruitment (high field MRI physicist)	Member of the search committee	2019
*Dept. of Radiology and Imaging Sciences	Data Integrity Committee	Committee member	2019-2020
*Dept. of Radiology and Imaging Sciences	Imaging sciences operation committee	Committee member	2019-present
*Dept. of Radiology and Imaging Sciences	Data analysis committee	Committee member	2020-2021
*Dept. of Radiology and Imaging Sciences	Research financial and business operation meeting	Committee member	2019-present
*Dept. of Radiology and Imaging Sciences	Faculty annual review	Co-Reviewer	2020-present

### SCHOOL

<b>Organization</b>	<b>Activity (times)</b>	<b>Role</b>	<b>Dates</b>
Dept. of Radiology and Imaging Sciences	Chair recruitment (3x)	Interviewer in a group setting	2014
Dept. of Psychiatry, Dr. McAllister (Department Chair)	Faculty recruitment (2x)	Interviewer	2015, 2016
Dept. of Radiology and Imaging Sciences	Vice Chair for Clinical Research recruitment	Interviewer in a group setting	2017

Dept. of Neurology, Dr. Apostolova	Postdoctoral fellow recruitment	Interviewer	2017
Dept. of Psychiatry, Dr. Oberlin	Postdoctoral fellow recruitment	Member of the search committee	2018
*Center for Neuroimaging	MRI physics service	MRI Physicist	2013-present
*IUSM	Indiana Medical Student Program for Research and Scholarship (IMPRS)	Judge	2018, 2019
*Roberts Translational Imaging Facility, IIBIS & SNRI	Manager recruitment	Member of the search committee	2019
*Roberts Translational Imaging Facility, IIBIS & SNRI	Staff recruitment, Veterinarian Technician (2X)	Chair, search committee	2019, 2021
*In-Vivo Imaging Core, IIBIS	Staff recruitment, Technologist (2X)	Member of the search committee	2020
*Dept. of Neurology, Dr. Apostolova (Director, Clinical core IADRC)	Faculty recruitment (2X)	Interviewer	2020, 2021
*Stark Neuroscience Research Institute	Core operation committee	Committee member	2020-present
*Cardiovascular Institute, Dr. Raman (Director, IUH/IUSM Cardiovascular Institute)	Faculty recruitment (4X)	Interviewer	2020, 2021, 2022
*Dept. of Neurology, Dr. Gutmann (Department Chair)	Faculty recruitment (2X)	Interviewer	2021

## **CAMPUS**

<b><i>Organization</i></b>	<b><i>Activity (times)</i></b>	<b><i>Role</i></b>	<b><i>Dates</i></b>
Indiana Institute for Biomedical Imaging Sciences (IIBIS)	Committee for MRI system purchase (4x)	Ad-hoc member	2013, 2016, 2017
Dept. of Intelligent Systems Engineering	Faculty recruitment	Interviewer	2016
Diversity Council	Committee meeting	Member	2016
*Indiana Alzheimer Disease Research Center	MRI Physics & Neuroimaging processing/analyses support	MRI Physicist	2013-present

## **UNIVERSITY**

<b><i>Organization</i></b>	<b><i>Activity (times)</i></b>	<b><i>Role</i></b>	<b><i>Dates</i></b>
Indiana Institute for Biomedical Imaging Sciences (IIBIS)	MRI Physics support	Member	2013-2019
Purdue University, Purdue Life Sciences MRI Center	MRI Physicist recruitment	Interviewer	2017
*Purdue University, School of Health Sciences	Faculty recruitment (3x)	Interviewer	2021, 2022
*In-Vivo Imaging Core, IIBIS	Leadership, Administrative	Scientific Director	2019-present
*Roberts Translational Imaging Facility, Stark Neuroscience Research Institute	Leadership, Administrative	Scientific Director	2019-present
*IADRC	Data request committee	Committee member	2022

## **PROFESSIONAL SERVICE - LOCAL**



<b>Organization</b>	<b>Activity (times)</b>	<b>Role</b>	<b>Dates</b>
Dartmouth Hitchcock Foundation	Grant review panel	Reviewer	2011
IU School of Medicine and IU-Bloomington	DiPY workshop (2x)	Co-organizer	2017
Indiana University Bloomington, Dept. of Psychological and Brain Sciences	4 <sup>th</sup> Indiana Neuroimaging Symposium	Co-organizer	2016
Purdue University, Dept. of Health and Human Sciences	5 <sup>th</sup> Indiana Neuroimaging Symposium	Co-organizer	2017
*IUSM	6 <sup>th</sup> Indiana Neuroimaging Symposium	Organizer, Chair	2019
*Indiana Clinical and Translational Sciences Institute (CTSI), Pilot Funding for Research Use of Core Facilities	Grant review panel (4x)	Reviewer	2015-present
*Biomedical Research Committee	Grant review panel (7x)	Reviewer	2016-present
*IADRC pilot project	Grant review panel	Reviewer	2020

## **PROFESSIONAL SERVICE – NATIONAL/INTERNATIONAL**

### **Grant reviewer**

<b>Organization</b>	<b>Times</b>	<b>Dates</b>
Parkinson's UK	1	2016
*National Alzheimer's Association	8	2016-present
*UC Davis Alzheimer's Disease Research Center pilot grant	1	2021
*NIH Study Section	4	2021 Feb. Oct. 2022 June, July
*Pennsylvania Department of Health	1	2022 May
* Alzheimer's Association International Research Grant Program (IRGP) Council	1	2022 June

### **Conference paper/abstract reviewer**

<b>Organization</b>	<b>Times</b>	<b>Dates</b>
Organization for Human Brain Mapping (OHBM) annual conference	1	2009
International Society of Magnetic Resonance in Medicine (ISMRM) annual conference	3	2007, 2009, 2016
Medical Image Computing and Computer Assisted Intervention (MICCAI)	2	2014, 2015
Chinese Neurotrauma Association Meeting	1	2015
*Alzheimer's Association International Conference (AAIC)	1	2021

### **Manuscript reviewer**

<b>Journal</b>	<b>Impact factor</b>	<b>Times</b>	<b>Dates</b>
<i>BioMed Central</i>	2.27	2	2009
<i>Nuclear Magnetic Resonance in Biomedicine</i>	2.87	7	2010-2017
<i>Neuropsychologia</i>	3.57	1	2011

<i>Journal of Magnetic Resonance Imaging</i>	3.08	3	2011-2014
<i>American Journal of Neuroradiology</i>	3.60	1	2012
<i>Magnetic Resonance Imaging</i>	2.67	1	2013
<i>Social Cognitive and Affective Neuroscience</i>	3.94	1	2015
Neural Regeneration Research	2.23	1	2015
<i>Medical Image Analysis</i>	4.19	1	2016
<i>Natural Communications</i>	12.12	2	2017
*Psychiatry research	2.39	1	2018
* <i>Scientific Reports</i>	4.26	3	2016-present
* <i>Magnetic Resonance in Medicine</i>	3.92	18	2006-present
* <i>NeuroImage</i>	6.94	87	2009-present
* <i>Brain Imaging and Behavior</i>	3.23	19	2013-present
*Alzheimer's & Dementia	17.13	9	2018-present
*Human Brain Mapping	4.93	3	2019-present
*Journal of Neurotrauma	5.27	3	2021-present
*Alzheimer's & Dementia: Diagnosis, Assessment and Disease Monitoring	5.18	2	2019
*Neurology	9.90	1	2021
*Journal of Neuroscience	6.17	2	2021
*Network Neuroscience	4.64	2	2021
*Neurobiology of Aging	4.67	1	2022
*IEEE-TMI	10.05	1	2022
*NeuroImage Clinical	4.35	1	2022
*Brain	13.5	2	2022

### **Journal editorial board**

<b><i>Journal</i></b>	<b><i>Impact factor</i></b>	<b><i>Dates</i></b>
* <i>NeuroImage</i>	6.94	2018-present
* <i>Frontiers in Neuroscience &amp; Neurology</i>	3.57	2020-2021

### **Editor**

<b><i>Journal</i></b>	<b><i>Impact factor</i></b>	<b><i>Dates</i></b>
* <i>Frontier in Neuroscience: Special Topic: Brain Imaging Methods</i>	3.88	2019-2020

### **Organizer/committee member/moderator**

<b><i>Organization</i></b>	<b><i>Activity</i></b>	<b><i>Role</i></b>	<b><i>Dates</i></b>
Center for Cognitive Neuroscience, Dartmouth College	2 <sup>nd</sup> International Neural Computation Workshop	Co-organizer	2012
*Reception, International Society of Magnetic Resonance in Medicine (ISMRM)	Welcoming newbie	MR expert	2017, 2018, 2019, 2022
*Publication Committee, International Society of Magnetic Resonance in Medicine (ISMRM)	Review policy	Committee Member	2017-2020

*Reception, International Society of Magnetic Resonance in Medicine (ISMRM)	Fun Run	Volunteer	2019
*Annual Meeting Program Committee, International Society of Magnetic Resonance in Medicine (ISMRM)	Scientific sessions	Moderator	2017, 2021, 2022(2x)
*ISMRM Workshop in Neurofluid	Scientific session	Moderator	2022

## **PUBLICATIONS - RESEARCH**

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### **Book Chapter**

\***Wu YC**. Microstructural imaging of the human brain with normal and “abnormal” aging using diffusion magnetic resonance imaging. The Neuroscience of Aging, Book 2, Chapter 2.3, Editor Preedy VR, Publisher Elsevier 2021.

### **Invited Article**

\*Broxmeyer HE, Yoder KK, **Wu YC**, Hutchins GD, Cooper SH, Farag SS. The Brain: Is it a Next Frontier to Better Understand the Regulation and Control of Hematopoiesis for Future Modulation and Treatment? Stem Cell Reviews and Reports 2021. <https://doi.org/10.1007/s12015-021-10203-0>

\*Gatto RG, **Wu YC**. Editorial: Innovative Imaging Techniques in Preclinical Models of Neurodegenerative Diseases. Frontiers in Neuroscience. 2021 doi: 10.3389/fnins.2021.801037

\* McCrea MA, Broglio SP, Wu YC, Nencka AS, Koch KM, Saykin AJ, Brett BL, Klein AP, Meier TB, Pasquina P, McAllister TW. Advanced Neuroimaging of Concussion: Findings from the CARE Consortium Brain Injury Professional. 2022 submitted

### **Peer-Reviewed Publications**

1. Field AS, Alexander AL, **Wu YC**, Hasan KM, Witwer B, Badie B. Diffusion Tensor Eigenvector Directional Color Imaging Patterns in the Evaluation of Cerebral White Matter Tracts Altered by Tumor. *J Magn Reson Imaging* 2004;20(4):555-562. (IP=3.08)
2. **Wu YC**, Field AS, Badie B, Alexander AL<sup>†</sup>. Quantitative Analysis of Diffusion Tensor Orientation: Theoretical Framework. *Magnetic Resonance in Medicine* 2004;52(5):1146-1155. (IP=3.92)
3. Field AS, **Wu YC**, Alexander AL. Principal Diffusion Direction in Peritumoral Fiber Tracts: Color Map Patterns and Directional Statistics. *Ann NY Acad Sci* 2005;1064:193-201. (IP=4.71)
4. Alexander AL, **Wu YC**, Venkat PC. Hybrid Diffusion Imaging (HYDI). In proc. IEEE-EMBS, New York City, USA, 2006. p2245-2248.
5. Alexander AL, Lee JE, **Wu YC**, Field AS. Comparison of DTI Measurements at 1.5T and 3.0T with and without Parallel Imaging. *Neuroimaging Clinical N Am.* 2006;16(2):299-309. (IP=4.52)
6. **Wu YC**<sup>†</sup>, Alexander AL. A Method for Calibration Diffusion Gradients in Diffusion Tensor Imaging. *J Comput Assist Tomogr* 2007;31(6):984-993. (IP=1.39)
7. **Wu YC**<sup>†</sup>, Alexander AL. Hybrid Diffusion Imaging. *NeuroImage* 2007;36(3):617-629. (IP=6.94)
8. Liu H-L, Chen H-M, **Wu YC**, Lim S-N, Huang C-M, Hsu Y-Y, Wu T. False Positive Analysis of Functional MRI during Simulated Deep Brain Stimulation. *J Magn Reson Imaging* 2008;27:1439-1442. (IP=3.08)
9. **Wu YC**<sup>†</sup>, Field AS, Alexander AL. Computation of Diffusion Function Measures in q-Space Using Magnetic Resonance Hybrid Diffusion Imaging. *IEEE Trans Med Imaging* 2008;27(6):858-865. (IP=11)

10. Chung M, **Wu YC**, Alexander AL. 3D Eigenfunction Expansion of Sparsely Sampled 2D Cortical Data. International Symposium on Biomedical Imaging (ISBI), 2009. P113-116. DOI: [10.1109/ISBI.2009.5192996](https://doi.org/10.1109/ISBI.2009.5192996)
11. O'Halloran RL, Holmes JH, **Wu YC**, Alexander AL, Fain SB. Helium-3 MR q-Space Imaging with Radial Acquisition and Iterative Highly Constrained Back-Projection. *Magnetic Resonance in Medicine* 2010;63:41-50. (IP=3.92)  
doi: [10.1002/mrm.22158](https://doi.org/10.1002/mrm.22158)
12. **Wu YC**<sup>†</sup>, Field AS, Whalen PJ, Alexander AL. Age and Gender Related Changes in the Normal Human Brain using Hybrid Diffusion Imaging (HYDI). *NeuroImage* 2011;54:1840-1853. (IP=6.94)
13. **Wu YC**<sup>†</sup>, Field AS, Duncan ID, Samsonov AA, Kondo Y, Tudorascu D, Alexander AL. High b-value and diffusion tensor imaging in a canine model of dysmyelination and brain maturation. *NeuroImage* 2011;58:829-837. (IP=6.94)
14. Hosseinbor AP, Chung MK, **Wu YC**, Alexander AL. Bessel Fourier Orientation Reconstruction: An Analytical EAP Reconstruction Using Multiple Shell Acquisitions in Diffusion MRI. In MICCAI (2) 2011;217-225.
15. Hosseinbor AP, Chung MK, **Wu YC**, Fleming JO, Field AS, Alexander AL. Extracting Quantitative Measures from EAP: A Small Clinical Study using BFOR. In MICCAI 2012:280-287.
16. Connolly AC, Guntupalli SJ, Gors J, Hanke M, Halchenko YO, **Wu YC**, Abdi H, Haxby JV. Representation of Biological Classes in the Human Brain. *J. of Neuroscience* 2012;32:2608-2618. (IP=5.92)
17. Samsonov A, Alexander AL, Mossahebi P, **Wu YC**, Duncan ID, Field AS. Quantitative MR imaging of two-pool magnetization transfer model parameters in myelin mutant shaking pup. *Neuroimage* 2012 Sep;62(3):1390-8. (IP=6.94)
18. Hosseinbor AP, Chung MK, **Wu YC**, Alexander AL. Bessel Fourier Orientation Reconstruction (BFOR): An Analytical Diffusion Propagator Reconstruction for Hybrid Diffusion Imaging and Computation of q-Space Indices. *NeuroImage* 2012;64:650-670. (IP=6.94)
19. Liu JV, Kobylarz EJ, Darcey TM, Lu Z, **Wu YC**, Meng M, Jobst BC. Improved mapping of interictal epileptiform activity with EEG-fMRI and voxel-wise functional connectivity analysis. *Epilepsia* 2014;55(9):1380-1388. (IP=4.71)
20. Hosseinbor AP, Chung MK, **Wu YC**, Alexander AL, Bendlin BB. A 4D hyperspherical interpretation of q-space. *Med Image Comput Assist Interv* 2014;16(3):501-509.
21. Hosseinbor AP, Chung MK, **Wu YC**, Bendlin BB, Alexander AL. A 4D Hyperspherical Interpretation of q-space. *Medical Image Analysis* 2015;21(1):15-28. (IP=4.19)
22. Kodiweera C, **Wu YC**<sup>†</sup>. Validation of Hybrid Diffusion Imaging (HYDI) Acquisition Scheme for NODDI Model Computation. *Data in Brief*. 2016;7:1131-1138. (IP=0.21)
23. Kodiweera C, Alexander AL, Jaroslaw H, McAllister TW, **Wu YC**<sup>†</sup>. Age Effects and Sex Differences in Human Brain White Matter of Young to Middle-Aged Adults: A DTI, NODDI, and q-Space Study. *Neuroimage*. 2016; 128:180-192. (IP=6.94)
24. Kim JM, Brown AC, Mattek AM, Chavez SJ, Taylor JM, Palmer AL, **Wu YC**, Whalen PJ. The inverse relationship between the microstructural variability of amygdala-prefrontal pathways and trait anxiety is moderated by sex. *Frontiers in Systems Neuroscience*, 2016;00093. (IP=3.79)
25. Cong S, Rizkalla M, Salama P, Risacher SL, West JD, **Wu YC**, Apostolova L, Tallman E, Saykin AJ, Shen L, ADNI. Building a surface atlas of hippocampal subfields from high resolution T2-weighted MRI scans using landmark-free surface registration. MWSCAS'16: The IEEE 59th International Midwest Symposium on Circuits and Systems, Abu Dhabi, United Arab Emirates, October 16-19, 2016.
26. Wen Q, Stirling BD, Sha L, Shen L, Whalen PJ, **Wu YC**<sup>†</sup>. Parcellation of Human Amygdala Subfields Using Orientation Distribution Function and Spectral K-means Clustering. *Medical Image Computing & Computer Assisted Intervention (MICCAI)*, P.3. Athens, Greece, 2016. Published in Springer 2017 P123-133.
27. Hulvershorn L, Hummer T, **Wu YC**, Tarter R, Rea P, Anand A, Chambers RA, Finn P. White Matter Microstructural Abnormalities Associated with Addition Liability Score in Drug Naïve Youth. *Brain Imaging and Behavior*, 2018 Feb;12(1):274-283. doi: [10.1007/s11682-017-9679-x](https://doi.org/10.1007/s11682-017-9679-x) (IP=3.23)

28. Wen Q, Kodiweera C, Dale B, Shivraman G, **Wu YC**<sup>†</sup>. Rotating single-shot acquisition (RoSA) with composite reconstruction for fast high-resolution diffusion imaging. *Magnetic Resonance in Medicine*, 2018;79:264-275. doi: [10.1002/mrm.26671](https://doi.org/10.1002/mrm.26671) (IP=3.92)
29. Mustafi SM, Harezlak J, Koch KM, Nencka AS, Meier TB, Giza CC, Difiori JP, Guskiewicz KM, Mihalik JP, LaConte SM, Duma S, West JD, Saykin AJ, McCrea M, McAllister TW, **Wu YC**<sup>†</sup>. Acute White-Matter Abnormalities in Sports-Related Concussion: A Diffusion Tensor Imaging Study from the NCAA-DoD CARE Consortium. *Journal of Neurotrauma*, 2018;35:2653–2664. (IP=5.19)
30. Nencka AS, Meier TB, Wang Y, Muftuler TL, **Wu YC**, Saykin AJ, Harezlak J, Brooks AM, Giza CC, Difiori JP, Guskiewicz KM, Mihalik JP, LaConte SM, Duma SM, Broglio SP, McAllister TW, McCrea M, Koch KM. Stability of MRI Metrics in the Advanced Research Core of the NCAA-DoD Concussion Assessment, Research and Education (CARE) Consortium. *Brain Imaging and Behavior*, 2017;12(4):1121-1140. (IP=3.23)
31. Cong S, Risacher SL, West JD, **Wu YC**, Apostolova L, Tallman E, Rizkalla M, Salama P, Saykin AJ, Shen L. Volumetric Comparison of Hippocampal Subfields Extracted from 4-Min Accelerated versus 8-Min High-resolution T2-weighted 3T MRI Scans. *Brain Imaging and Behavior*, 2018;12(6):1583-1595. doi: [10.1007/s11682-017-9819-3](https://doi.org/10.1007/s11682-017-9819-3) (IP=3.23)
32. \*Yan J, Liu K, Amico E, Risacher SL, **Wu YC**, Fang S, Sporns O, Saykin AJ, Goni J, Shen L. (2018) Joint Exploration and Mining of Memory-Relevant Brain Anatomic and Connectomic Patterns via a Three-Way Association Mode. *International Symposium on Biomedical Imaging (ISBI)*. 6-9.
33. \***Wu YC**<sup>†</sup>, Mustafi SM, Harezlak J, Kodiweera C, Flashman LA, McAllister TW. (2018) Hybrid Diffusion Imaging in Mild Traumatic Brain Injury. *Journal of Neurotrauma*. 35:2377-2390. **Featured on the front cover.** (IP=5.19)
34. \*Mustafi SM, Harezlak J, Kodiweera C, Randolph JS, Ford JC, Wishart HA, **Wu YC**<sup>†</sup>. (2018) Detecting White Matter Alterations in Multiple Sclerosis Using Advanced Diffusion Magnetic Resonance Imaging. *Neural Regeneration Research*. 14(1)114-123. (IP=2.23)
35. \*Gatto RG, Mustafi SM, Amin MY, Mareci TH, **Wu YC**, Magin RL. (2018) Neurite orientation dispersion and density imaging can detect presymptomatic axonal degeneration in the spinal cord of ALS mice. *Funct Neurol*. 33(3):155-163. (IP=0.92)
36. \*Wang Y, Nencka AS, Meier TB, Guskiewicz KM, Mihalik JP, Brooks AM, Saykin AJ, Koch KM, **Wu YC**, Lindsay ND, Broglio SP, McAllister TW, McCrea M. (2018) Cerebral Blood Flow in Acute Concussion: ASL Findings from the NCAA-DoD CARE Consortium. *Brain Imaging and Behavior*. 13(5):1375-1385 (IP=3.23)
37. \*Xie L, Amico E, Salama P, **Wu YC**, Fang S, Sporns O, Saykin AJ, Goni J, Yan J, Shen L. (2018) Heritability Estimation of Reliable Connectomic Features. *Connectomic in Neuroimaging*. 11083:58–66.
38. \*Klein AP, Tetzlaff JE, Bonis JM, Nelson LD, Mayer AR, Huber DL, Harezlak J, Mathews VP, Ulmer JL, Sinson GP, Nencka AS, Koch KM, **Wu YC**, Saykin AJ, DiFiori JP, Giza CC, Goldman J, Guskiewicz KM, Mihalik JP, Duma SM, Rowson S, Brooks A, Broglio SP, McAllister T, McCrea MA, Meier TB. (2019) Prevalence of clinically significant MRI findings in athletes with and without sport-related concussion. *Journal of Neurotrauma*. 36(11):1776-1785. (IP=5.19)
39. \*Yan J, Vinesh RV, Huang Z, Amico E, Nho K, Fang S, Sporns O, **Wu YC**, Saykin AJ, Goni J, Shen L. (2019) Brain-wide structural connectivity alterations under the control of Alzheimer’s risk gene. *Int. J. Computational Biology and Drug Design*. 13(1):58-70 (IP=0.23)
40. \*Ho CY, Deardorff R, Kralik SF, West J, **Wu YC**, Shih CS. (2019) Comparison of multi-shot and single shot echo-planar diffusion tensor techniques for the optic pathway in patients with neurofibromatosis type 1. *Neuroradiology*. 61(4):431-441. doi: [10.1007/s00234-019-02164-6](https://doi.org/10.1007/s00234-019-02164-6) (IP=2.35).
41. \*Contreras JA, Avena-Koenigsberger A, Risacher SL, West JD, Tallman E, McDonald BC, Farlow MR, Apostolova LG, Goñi J, Dzemidzic M, **Wu YC**, Kessler D, Jeub L, Fortunato S, Saykin AJ, Sporns O. (2019) Resting state network modularity along the prodromal late onset Alzheimer’s disease continuum. *NeuroImage Clinical*. 2019; 22:101687. <https://doi.org/10.1016/j.nicl.2019.101687> (IP=4.81).
42. \*Wen Q, Mustafi SM, Harezlak J, Li J, Risacher SL, West JD, Tallman E, Farlow MR, Unverzagt FW, Gao S, Apostolova LG, Saykin AJ, **Wu YC**<sup>†</sup>. (2019) White-matter alterations in early-stage Alzheimer’s disease: A tract-specific study.

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doi: [10.1016/j.dadm.2019.06.003](https://doi.org/10.1016/j.dadm.2019.06.003) (new journal cite score 5.18)

43. \*Elsaid NMH, **Wu YC**<sup>†</sup>. (2019) Super-Resolution Diffusion Tensor Imaging using SRCNN: A Feasibility Study. 41<sup>st</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Berlin, Germany. pp. 2830-2834. doi: [10.1109/EMBC.2019.8857125](https://doi.org/10.1109/EMBC.2019.8857125)
44. \*Meier TB, Giraldo-Chica M, España LY, Mayer AR, Nencka AS, Wang Y, Koch KM, **Wu YC**, Harezlak J, Saykin AJ, Giza CC, Goldman J, Guskiewicz KM, Mihalik JP, Brooks A, Broglio SP, McAllister TW, McCrea MA. (2020) Resting-state fMRI metrics in acute sport-related concussion and their association with clinical recovery: A study from the NCAA-DOD CARE Consortium. *Journal of Neurotrauma*. 37(1):152-162. (IP=5.19)
45. \***Wu YC**<sup>†</sup>, Harezlak J, Mustafi SM, Elsaid NMH, Lin Z, Wen Q, Rikken LD, Koch KM, Nencka AS, Meier TB, Mayer AR, Wang Y, Giza CC, DiFiori JP, Guskiewicz KM, Mihalik JP, LaConte SM, Duma SM, Broglio SP, Saykin AJ, McCrea MA, McAllister TW. (2020) Longitudinal White-Matter Abnormalities in Sports-Related Concussion: A Diffusion MRI study. *Neurology*. 95(7):781-792. (IP=8.06) **featured in editorial commentary**
46. \*Brett BL, **Wu YC**, Mustafi SM, Saykin AJ, Koch KM, Nencka AS, Giza CC, Goldman J, Guskiewicz KM, Mihalik JP, Duma SM, Broglio SP, McAllister TW, McCrea MA, Meier TB. (2020) The association between persistent white-matter abnormalities and risk of repeat injury after sport-related concussion. *Frontier Neurology*. 10:1345. (IP=3.55)
47. \*Bobholz SA, Brett BL, Espana LY, Huber DL, Mayer AR, Harezlak J, Broglio SP, McAllister TW, McCrea MA, Meier TB. CARE Consortium Investigators: DiFiori JP, Saykin AJ, **Wu YC**, Koch KM, Nencka AS, Wang Y, Giza CC, Goldman J, Guskiewicz KM, Mihalik JP, Brooks A, Duma SM, Rowson, S. (2020) Prospective study of the effects of sport-related concussion on brain morphometry in collegiate athletes: A study from the NCAA-DOD CARE Consortium. *British Journal of Sports Medicine*. 55(3):169-174. (IP=11.65)
48. \*Wen Q<sup>†</sup>, Risacher SL, Xie L, Li J, Harezlak J, Farlow MR, Unverzagt FW, Gao S, Apostolova LG, Saykin AJ, and **Wu YC**<sup>†</sup>. (2021) Tau-Related White-Matter Alterations Along Spatially Selective Pathways. *NeuroImage*. 226. (IP=6.94)
49. \*Wen Q<sup>†</sup>, Li F, Zhou K, and **Wu YC**. (2020) Rapid Golden-Angle Diffusion-Weighted PROPELLER MRI for Simultaneous Assessment of ADC and IVIM. *NeuroImage*. 223. (IP=6.94).
50. \*Radhakrishnan R, Elsaid NMH, Reher TA, Hines AC, Yoder K PhD, Saykin AJ, **Wu YC**. (2021) Resting state functional MRI in infants with prenatal opioid exposure-a pilot study. *Neuroradiology*. 63(4):585-591.
51. \*Ye Z, Gary SE, Sun P, Mustafi SM, Glenn GR, Yeh FC, Merisaari H, Huang GS, Kao HW, Lin CY, **Wu YC**, Jensen JH, Song SK. (2021) The Impact of Edema and Fiber Crossing on Diffusion MRI Metrics: DBSI vs. dODF. *NMR in Biomedicine*. 34(1). (IP=3.04)
52. \*Grecco GG, Mork B, Haggerty DL, Reeves KC, Gao Y, Hoffman H, Huang JY, Katner S, Engleman EA, Masters AR, Metzger C, Newell EA, Kim J, Allen MR, Yamamoto BK, Sheets PL, **Wu YC**, Lu HC, Atwood BK. (2021) Prenatal Methadone Exposure Disrupts Behavioral Development and Alters Motor Neuron Intrinsic Properties and Local Circuitry. *eLife*. doi: [10.7554/eLife.66230](https://doi.org/10.7554/eLife.66230). (IP= 8.14)
53. \*Chumin EJ, Risacher SL, West JD, Apostolova LG, Farlow MR, McDonald BC, **Wu YC**, Saykin AJ, Sporns O. (2021) Time-varying ventral attention network stability and cognitive function along the Alzheimer's disease spectrum. *NeuroImage Clinical*. 31:102726. (IP=4.81).
54. \*Risacher SL, West JD, Deardorff R, Gao Sujuan, Farlow MR, Brosch J, Apostolova LG, McAllister TW, **Wu YC**, William JJ, Landau SM, Weiner MW, Saykin AJ, for the Alzheimer's Disease Neuroimaging Initiative. (2021) Head injury is associated with tau deposition on PET in MCI and AD patients. *Alzheimer's & Dementia: Diagnosis, Assessment and Disease Monitoring*. 24;13(1):e12230. (new journal cite score 5.18)
55. \*Hall Z, Chien B, Risacher SL, Saykin AJ, **Wu YC**<sup>†</sup>, Wen Q<sup>†</sup>. (2021) Tau Deposition and Structural Connectivity Demonstrate Differential Association Patterns with Neurocognitive Tests. *Brain Imaging and Behavior*, Sep 17. doi: [10.1007/s11682-021-00531-7](https://doi.org/10.1007/s11682-021-00531-7). April. **Featured on the front cover**. (IP=3.23)
56. \*Vishnubhotla RV, Radhakrishnan R, Kveraga K, Deardorff R, Ram C, Pawale D, **Wu YC**, Renschler J, Subramaniam B, Sadhasivam S. (2021) Advanced Meditation Alters Resting-state Brain Network Connectivity Correlating with Improved Mindfulness. *Frontiers in Psychology*. 18;12:745344. (IP=2.99)

57. \*Fadnavis S, Endres S, Wen Q, **Wu YC**, Cheng H, Koudoro S, Rane S, Rokem A, Garyfallidis. (2021) Bifurcated Topological Optimization for IVIM. *Frontiers in Neuroscience*. doi: 10.3389/fnins.2021.779025. (IP=4.5)
58. \*Mustafi SM, Harezlak J, Giza CC, Goldman J, Guskiewicz KM, Mihalik JP, LaConte SM, Duma S, Broglio SP, McCrea M, McAllister TW, **Wu YC**<sup>†</sup> Effects of White-Matter Tract Length in Sports-Related Concussion: A Tractography Study from the NCAA-DoD CARE Consortium. *J. Neurotrauma*. 2022. accepted. (IP= 5.27)
59. \*Shahid SS, Wen Q, Risacher SL, Farlow MR, Unverzagt FW, Apostolova LG, Foroud TM, Zetterberg H, Blennow K, Saykin AJ, **Wu YC**<sup>†</sup>. Hippocampal-subfield microstructures and their relation to plasma biomarkers in Alzheimer's disease. *Brain*. 2022. [10.1093/brain/awac138](https://doi.org/10.1093/brain/awac138), accepted. (IP= 13.5) **featured in editorial commentary**
60. \*Elsaid NMH, Coupé P, Saykin AJ, **Wu YC**. Structural Connectivity Mapping in Human Hippocampal-Subfields Using Super-Resolution HYDI MRI: A Feasibility Study. *Neuroradiology* 2022 accepted. (IP= 2.84)
61. \*Vijayakrishnan V, Kish BR, Inglis B, Yang HC, Wright AM, **Wu YC**, Zhou X, Schwichtenberg AJ, Tong Y. Human CSF movement influenced by vascular low frequency oscillations and respiration. *Frontier in Neuroscience* 2022 accepted.
62. \*Wen Q, Tong Y, Zhou X, Dziedzic M, Ho CY, **Wu YC**. Assessing Pulsatile Waveforms of Paravascular Cerebrospinal Fluid Dynamics using CARDiac-cycle Resolved Diffusion-weighted Imaging (CARDI). *NeuroImage* 2022, accepted.
63. \*Grecco GG, Shahid S, Atwood BK, **Wu YC**<sup>†</sup>. Alterations of Brain Microstructures in a Mouse Model of Prenatal Opioid Exposure Detected by Diffusion MRI. *Scientific Reports* 2022 accepted.

IP: Impact Factor

<sup>†</sup> Corresponding author

\* in rank activity

### **Peer-Reviewed Conference Abstracts (First Author)**

Abstracts for the International Society of Magnetic Resonance in Medicine (ISMRM) are reviewed by 3-5 reviewers, and the acceptance rate is approximately 55% for poster and 15% for oral presentations.

1. **Wu YC** et al. Characteristic MRI findings of spinal angioliopoma, a case report. The 49<sup>th</sup> Annual Meeting of the Radiological Society of ROC, 2000.
2. **Wu YC**, Field AS, Badie B, Alexander AL. Quantitative analysis of diffusion tensor eigenvectors of white matter infiltration by tumors and edema. ISMRM 11<sup>th</sup> Annual meeting, Toronto, Canada, 2003. Accepted for poster presentation.
3. **Wu YC**, Field AS, Alexander AL. Quantitative analysis of diffusion tensor orientation: theoretical framework and normal white matter anatomy. ISMRM 11<sup>th</sup> Annual meeting, Toronto, Canada, 2003. Accepted for poster presentation.
4. **Wu YC**, Alexander AL. The effect of the finite q-space sampling in diffusion spectrum imaging. ISMRM 13<sup>th</sup> Annual meeting, Miami, USA, 2005. Accepted for oral presentation.
5. **Wu YC**, Alexander AL. Hybrid diffusion imaging for complex diffusion characterization. ISMRM 13<sup>th</sup> Annual meeting, Miami, USA, 2005. Accepted for oral presentation.
6. **Wu YC**, Thottakara PJ, Alexander AL. Diffusion Gradient Calibration for DTI. ISMRM 13<sup>th</sup> Annual meeting, Miami, USA, 2005. Accepted for poster presentation.
7. **Wu YC**, Alexander AL, Lee JE, Field AS. Comparison of DTI measurements at 1.5T and 3.0T with and without parallel imaging. ASNR 44<sup>th</sup> Annual meeting, San Diego, USA, 2006. Accepted for poster presentation.
8. **Wu YC**, Alexander AL. Quantitative comparison between Hybrid Diffusion Imaging and Diffusion Spectrum Imaging. ISMRM 14<sup>th</sup> Annual meeting, Seattle, USA, 2006. Accepted for poster presentation.

9. **Wu YC**, Samsonov AA, Alexander AL, Duncan ID, Field AS. Quantitative magnetization transfer, and diffusion spectrum imaging in a myelin mutant at 3T. In Proc. ASNA 45<sup>th</sup> Annual meeting, Chicago, USA, 2007. Accepted for poster presentation.
10. **Wu YC**, Alexander AL, Duncan ID, Field AS. Hybrid diffusion imaging in a brain model of dysmyelination. ISMRM-ESMRMB Joint Annual meeting, Berlin, Germany, 2007. Accepted for oral presentation.
11. **Wu YC**, Field AS, Alexander AL. Computation of diffusion function measures in q-space using Magnetic resonance hybrid diffusion imaging. ISMRM 16<sup>th</sup> Annual meeting, Toronto, Canada, 2008. Accepted for oral presentation.
12. **Wu YC**, Haeberli FB, Huang YM, Field AS, Alexander AL. Age related changes of the human brain using magnetic resonance hybrid diffusion imaging. OHBM Melbourne, Australia, 2008. Accepted for poster presentation.
13. **Wu YC**, Alexander AL, Duncan ID, Field AS. Hybrid Diffusion Imaging (HYDI) in a Brain Model of Dysmyelination. ISMRM 17<sup>th</sup> Annual meeting, Honolulu, Hawaii, USA, 2009. Accepted for oral presentation.
14. **Wu YC**, Haeberli FB, Field AS, Alexander AL. Age and Gender Related Changes of Human Brains Using Magnetic Resonance Hybrid Imaging. ISMRM 17<sup>th</sup> Annual meeting, Honolulu, Hawaii, USA, 2009. Accepted for poster presentation.
15. **Wu YC**, Mistretta CA, Alexander AL, Andrews T, Whalen PJ, Haxby J. High Angular Resolution Diffusion Imaging (HARDI) with Highly Constrained Back Projection Reconstruction (HYPR). ISMRM 18<sup>th</sup> Annual meeting, Stockholm, Sweden, 2010. Accepted for poster presentation
16. **Wu YC**, Connolly AC, Whalen PJ, Haxby J. Comparison of fMRI Image Quality Using a 32-Channel Head Coil versus an 8-Channel Head Coil. OHBM Quebec City, Canada, 2011. Accepted for poster presentation.
17. **Wu YC**, McAllister TW. Hybrid Diffusion Imaging (HYDI) of Mild Traumatic Brain Injury (MTBI). Poster presentation delivered at the ISMRM 20<sup>th</sup> Annual meeting, Melbourne, Australia 2012.
18. **Wu YC**, Kodiweera C. Rotating Short-Axis EPI “blades” as veering diffusion gradient directions with composite reconstruction (RSA). ISMRM-ESMRMB Joint Annual meeting, Milan, Italy, 2014. Accepted for oral presentation.
19. **Wu YC**. Quantitative Evaluation of Rotating Short-Axis (RSA) EPI for High Spatial Resolution Diffusion MRI. ISMRM Toronto, Canada, 2015. Accepted for poster presentation.
20. **Wu YC**, Mustafi SM, Harezlak J, Koch KM, Nencka AS, Meier TB, Giza CC, DiFiori JP, Guskiewicz KM, Mihalik JP, LaConte SM, Duma S, West JD, Saykin AJ, McCrea M, McAllister TW. White-Matter Abnormalities in Sport-Related Concussion: A Longitudinal Study of Diffusion Magnetic Resonance Imaging from the NCAA-DoD CARE Consortium. Military Health System Research Symposium (MHSRS). Florida, USA, 2017. Accepted for oral presentation.
21. **\*Wu YC**, Mustafi SM, Harezlak J, Koch K, Nencka A, Meier TB, West J, Giza CC, DiFiori J, Guskiewicz K, Mihalik J, LaConte SM, Duma SM, Broglio S, Saykin AJ, McCrea M, McAllister TW. White-Matter Abnormalities in Sport-Related Concussion: A Longitudinal Study of Diffusion Magnetic Resonance Imaging from the NCAA-DoD CARE Consortium. MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM, MILITARY HEALTH SYSTEM RESEARCH SYMPOSIUM, Gaylord Palms Resort and Convention Center, Kissimmee, FL, United States, Academic, National. August 2018. Accepted for poster presentation.
22. **\*Wu YC**, Mustafi SM, Harezlak J, Goni J, Flashman L, McAllister TW. Effects of Track Length on White-Matter Abnormalities in Mild Traumatic Brain Injury. Conference, Organization for Human Brain Mapping, Organization for Human Brain Mapping, Roma Convention Center, Roma, Italy, Academic, International. June 2019. Accepted for poster presentation.
23. **\*Wu YC**, Mustafi, SM, Harezlak J, Rikken L, Koch K, Nencka A, Meier TB, Wang Y, Giza CC, DiFiori J, Guskiewicz K, Mihalik J, LaConte SM, Duma SM, Broglio S, McCrea M, Saykin AJ, McAllister TW. Effects of Tract Length in White Matter Alterations After Sports-Related Concussion: A Diffusion MRI Study from the NCAA-DoD CARE Consortium. Conference, International Society for Magnetic Resonance in Medicine, International Society for Magnetic Resonance in Medicine, Montreal Convention Center, Academic, International. May 2019. Accepted for poster presentation.
24. **\*Wu YC**, Mustafi SM, Harezlak J, Elsaid NM, Lin Z, Rikken L, Koch K, Nencka A, Meier TB, Wang Y, Giza C, DiFiori J, Guskiewicz K, Mihalik J, LaConte S, Duma S, Broglio S, McCrea M, Saykin AJ, McAllister TW. Longitudinal White-Matter Abnormalities in Sports-Related Concussion: A Study of Diffusion Magnetic Resonance Imaging from the



NCAA-DoD CARE Consortium. Conference, International Society for Magnetic Resonance in Medicine, International Society for Magnetic Resonance in Medicine, Montreal Convention Center, Canada, Academic, International. May 2019. Accepted for poster presentation.

25. \***Wu YC**<sup>†</sup>, Harezlak J, Mustafi SM, Elsaid NMH, Lin Z, Wen Q, Rikken LD, Koch KM, Nencka AS, Meier TB, Mayer AR, Wang Y, Giza CC, DiFiori JP, Guskiewicz KM, Mihalik JP, LaConte SM, Duma SM, Broglio SP, Saykin AJ, McCrea MA, McAllister TW. Associations Between White-Matter Abnormalities and Clinical Outcomes in Sport-Related Concussion: A Longitudinal Study of Diffusion Magnetic Resonance Imaging from the NCAA-DoD CARE Consortium. MHSRS 2019. Accepted for poster presentation.
26. \***Wu YC**<sup>†</sup>, Wen Q, Gill JM, Thukral R, Gao S, Lane KA, Meier TB, Rikken LD, Harezlak J, Giza CC, Goldman J, Guskiewicz KM, Mihalik JP, LaConte SM, Duma SM, Broglio SP, Saykin AJ, McAllister TW, McCrea MA. Longitudinal associations between blood biomarkers and white-matter MRI in sport-related concussion: A study of the NCAA-DoD CARE Consortium. International Society for Magnetic Resonance in Medicine, London, UK. May 2022. Accepted for oral presentation.

**Acronyms:** **ASNR:** American Society of Neuroradiology; **ESMRMB:** European Society for Magnetic Resonance in Medicine & Biology; **ISMRM:** International Society for Magnetic Resonance in Medicine; **OHBM:** Organization for Human Brain Mapping. **MHSRS:** Military Health System Research Symposium

#### **Peer-Reviewed Conference Abstracts (senior author)**

1. Kodiweera C, McAllister TW, **Wu YC**<sup>†</sup>. Hybrid Diffusion Imaging (HYDI) of Acute Mild Traumatic Brain Injuries (mTBI): A Comparison of Diffusion Measures between DTI, PDF and NODDI. 2013 ISMRM Workshop Diffusion as a Probe of Neural Tissue Microstructure, Podstrana, Croatia, 14-18 October 2013. Accepted for poster presentation.
2. Kodiweera C, Alexander AL, **Wu YC**<sup>†</sup>. Age and Gender - Related Changes in the Normal Human Brain Using Hybrid Diffusion Imaging (HYDI) with Neurite Orientation Dispersion and Density Imaging (NODDI) Analysis. ISMRM-ESMRMB Joint Annual meeting, Milan, Italy, 2014. Accepted for poster presentation.
3. Stirling BD, **Wu YC**<sup>†</sup>, Sha L, Haxby J, Whalen PJ. Automated Segmentation of the Human Amygdala Using High Angular Diffusion Imaging (HARDI) and Spectral k-Means Clustering. ISMRM-ESMRMB Joint Annual meeting, Milan, Italy, 2014. Accepted for poster presentation.
4. Mustafi SM, Kodiweera C, Randolph JS, Ford JC, Wishart HA, **Wu YC**<sup>†</sup>. Neurite orientation dispersion and density imaging (NODDI) in Multiple Sclerosis. ISMRM Toronto, Canada, 2015. Accepted for poster presentation.
5. Kodiweera C, Alexander AL, Wu YC. NODDI Measures Appear to be Sensitive to Both Age and Gender. ISMRM Toronto, Canada, 2015. Accepted for poster presentation.
6. Mustafi SM, Territo PR, McCarthy BP, Riley AA, Lei J, Lin C, Wen Q, Molitoris BA, Hutchins GD, **Wu YC**<sup>†</sup>. Magnetic Resonance Diffusion Tensor and q-space imaging in an Animal Model of Chronic Kidney Disease. ISMRM Singapore, 2016. Accepted for poster presentation.
7. Mustafi SM, Kodiweera C, Flashman LA, McAllister TW, **Wu YC**<sup>†</sup>. HYbrid Diffusion Imaging to Detect Acute White Matter Injury After Mild TBI. ISMRM, Singapore, 2016. Accepted for poster presentation.
8. Mustafi SM, Gandhi PK, Risacher SL, West JD, Tallman EF, O'Neill DP, Farlow MR, Unverzagt FW, Apostolova LG, Saykin AJ, **Wu YC**<sup>†</sup>. Hybrid Diffusion Imaging (HYDI) of White Matter Changes in Older Adults with Subjective Cognitive Decline (SCD): Assessment of Orientation Dispersion and Axonal Density. AAIC 2016, Toronto, Canada; accepted for poster presentation.
9. Wen Q, Kodiweera C, **Wu YC**<sup>†</sup>. "Windowed" Composite Reconstruction Improves Rotating Short-Axis High Resolution DWI (RSA-DWI) in both Simulation and Human data. ISMRM, Singapore, 2016. Accepted for oral presentation.

10. Wen Q, Mustafi SM, Harezlak J, Risacher SL, West JD, Tallman E, Farlow MR, Unverzagt FW, Apostolova LG, Saykin AJ, **Wu YC**<sup>†</sup>. Axonal Density Associated with Cognitive Change Index in Older Adults with Subjective Cognitive Decline (SCD). AAIC 2017, London, UK; accepted for oral presentation.
11. Mustafi SM, Kodiweera C, Harezlak J, Flashman LA, McAllister TW, **Wu YC**<sup>†</sup>. White matter changes and correlations with cognitive functions in semi-acute mild traumatic brain injury (mTBI): A hybrid diffusion imaging study. ISMRM 2017, Hawaii, USA; accepted for oral presentation.
12. Mustafi SM, Harezlak J, Koch KM, Nencka AS, Meier TB, Saykin AJ, McCrea M, McAllister TW, **Wu YC**<sup>†</sup>, for CARE Consortium. Acute white matter abnormalities in sport-related concussion: A DTI study. ISMRM 2017, Hawaii, USA; accepted for oral presentation.
13. Wen Q, Graham MS, Drobnyak I, Zhang H, **Wu YC**<sup>†</sup>. Improving angular resolution in multi-shot turbo spin-echo imaging using rotating single-shot acquisition (RoSA). ISMRM 2017, Hawaii, USA; accepted for oral presentation.
14. Wen Q, Dale BM, Giri S, **Wu YC**<sup>†</sup>. Rotating Single-shot Acquisition (RoSA) combined with parallel imaging for fast high-resolution diffusion imaging. ISMRM 2017, Hawaii, USA; accepted for e-poster presentation.
15. Wen Q<sup>†</sup>, Graham MS, Mustafi SM, Zhang H, Drobnyak I, **Wu YC**<sup>†</sup>. Comparing the LPCA and MPPCA denoise approaches for diffusion MRI using human data simulation. ISMRM 2017, Hawaii, USA; accepted for e-poster presentation.
16. \*Wen Q, Li F, Zhou K, **Wu YC**. Intravoxel Incoherent Motion (IVIM) Fingerprinting. ISMRM 2018, Paris, France; accepted for poster presentation.
17. \*Mustafi SM, Harezlak J, Goni J, Flashman LA, McAllister TW, **Wu YC**<sup>†</sup>. Effects of Track Length on White Matter Alterations in Mild Traumatic Brain Injury. ISMRM 2018, Paris, France; accepted for poster presentation.
18. \*Wen Q, Mustafi SM, Harezlak J, Li J, Risacher SL, West JD, Tallman E, Farlow MR, Unverzagt FW, Apostolova LG, Saykin AJ, **Wu YC**<sup>†</sup>. White-Matter Microstructure in Early Stage Alzheimer's Disease. AAIC 2018, Chicago, USA; accepted for poster presentation.
19. \*Elsaid NMH, Wen Q, Mustafi SM, Risacher SL, Farlow MR, Apostolova LG, Saykin AJ, Harezlak J, **Wu YC**<sup>†</sup>. Alterations in White-Matter Diffusion Metrics in Preclinical Alzheimer's Disease: A Subject-Specific Analysis. AAIC 2018, Chicago, USA; accepted for poster presentation.
20. \*Wen Q, Risacher SL, Mustafi SM, Harezlak J, Xie L, West JD, Farlow MR, Unverzagt FW, Apostolova LG, Saykin AJ, **Wu YC**<sup>†</sup>. Tau Propagation Pattern Is Evidenced Through Associations with Structural Tract Alterations: A Data Driven Approach. ISMRM 2019, Montreal, Canada; accepted for oral presentation.
21. \*Wen Q, Li F, Zhou K, Leidecker C, **Wu YC**<sup>†</sup>. Golden-Angle Rotating Single-Shot Acquisition (GA-RoSA) for Simultaneous High-Resolution DTI and IVIM. Conference, International Society for Magnetic Resonance in Medicine, Montreal Convention Center, Canada, Academic, International. May 2019. Accepted for poster presentation.
22. \*Elsaid NM, **Wu YC**<sup>†</sup>. Super-Resolution Diffusion Imaging using Deep Learning: A Feasibility Study. International Society for Magnetic Resonance in Medicine. Montreal Convention Center, Canada, Academic, International. May 2019. Accepted for poster presentation.
23. \*Elsaid NM, Coupe P, **Wu YC**<sup>†</sup>. Super-Resolution Hybrid Diffusion Imaging (SR-HYDI). International Society for Magnetic Resonance in Medicine, Montreal Convention Center, Canada, Academic, International. May 2019. Accepted for poster presentation.
24. \*Elsaid NM, Coupe P, **Wu YC**<sup>†</sup>. Diffusion magnetic resonance imaging in the human hippocampal subfields using superresolution HYDI. International Society for Magnetic Resonance in Medicine. Montreal Convention Center, Canada, Academic, International. May 2019. Accepted for poster presentation.
25. \*Wen Q, Risacher SL, Mustafi SM, Harezlak J, Xie L, Li J, West JD, Tallman E, Farlow MR, Unverzagt FW, Apostolova LG, Saykin AJ, **Wu YC**<sup>†</sup>. Spatially Selective Tau-Related White-Matter Pathway Alterations Identified by a Data-Driven Approach. AAIC & AIC 2019, Los Anglos; accepted for poster presentation.
26. \*Elsaid NM, Coupe P, Saykin A, **Wu YC**<sup>†</sup>. Structural connectivity mapping in the human hippocampal subfields using super-resolution HYDI. AAIC & AIC 2019, Los Anglos, CA; accepted for poster presentation.

27. \*Elsaid NMH, Coupé P, Saykin AJ, **Wu YC**. Diffusion measures and Connectometry in the Human Hippocampal-Subfields Using Super-Resolution HYDI. ISMRM 2020, Sydney, Australia; accepted for power pitch oral presentation
28. \*Elsaid NMH, Zhuo J, Prince JL, **Wu YC**, Radhakrishnan R. Application of phase-based motion outlier detection to infant dMRI. ISMRM 2020, Sydney, Australia; accepted for poster presentation.
29. \*Wen Q, Tong Y, Zhou X, Dzemedzic M, Ho CY, **Wu YC**. Assessing Pulsatile Waveforms of Paravascular Cerebrospinal Fluid Dynamics using CARDiac-cycle Resolved Diffusion-weighted Imaging (CARDI). ISMRM 2022, London, UK: accepted for oral presentation.
30. Yang HC, Naugle K, Wen Q, White FA, **Wu YC**. Diffusion Tensor Imaging Biomarkers for Chronic Pain Following Mild Traumatic Injury. ISMRM 2022, London, UK: accepted for ePoster presentation.
31. \*Shahid SS, Paraiso HC, Yu ICI, and **Wu YC**. Role of neurochemistry in amyloid pathology using 5xFAD transgenic mouse model of AD: A single-voxel Magnetic Resonance Spectroscopy (MRS) study. accepted for Poster presentation AAIC 2022.
32. \*Shahid SS, Yen JH, Paraiso HC, **Wu YC**, and Yu ICI. Understanding the role of amyloid to cerebral microvasculature in Alzheimer's disease: A pre-clinical Intra Voxel Incoherent Motion (IVIM) MRI study. accepted for Poster presentation AAIC 2022.

**Acronyms:** **AAIC:** Alzheimer's Association International Conference; **ESMRMB:** European Society for Magnetic Resonance in Medicine & Biology; **ISMRM:** International Society for Magnetic Resonance in Medicine.

### **Patents & Intellectual Property**

1. Title: High-resolution diffusion-weighted magnetic resonance imaging  
Inventors: **Yu-Chien Wu** and Paul E. Holtzheimer  
Status: Patent Number: WO2015057745 A1
2. Title: A method to improve speed and image quality for diffusion magnetic resonance imaging  
Inventors: **Yu-Chien Wu** and Qiuting Wen  
Status: Provisional application 2016