

# Peiyang Liu

## List of Publications by Year in descending order

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95  
papers

3,651  
citations

136740

32  
h-index

161609

54  
g-index

96  
all docs

96  
docs citations

96  
times ranked

3989  
citing authors

#	ARTICLE	IF	CITATIONS
1	Estimation of labeling efficiency in pseudocontinuous arterial spin labeling. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 765-771.	1.9	216
2	Calibration and validation of TRUST MRI for the estimation of cerebral blood oxygenation. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 42-49.	1.9	162
3	Cerebrovascular reactivity (CVR) MRI with CO <sub>2</sub> challenge: A technical review. <i>NeuroImage</i> , 2019, 187, 104-115.	2.1	160
4	Effect of Hypoxia and Hyperoxia on Cerebral Blood Flow, Blood Oxygenation, and Oxidative Metabolism. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 1909-1918.	2.4	145
5	Life-long aerobic exercise preserved baseline cerebral blood flow but reduced vascular reactivity to CO <sub>2</sub> . <i>Journal of Magnetic Resonance Imaging</i> , 2013, 38, 1177-1183.	1.9	134
6	Impaired Cerebrovascular Reactivity in Multiple Sclerosis. <i>JAMA Neurology</i> , 2014, 71, 1275.	4.5	111
7	Cerebrovascular Reactivity in the Brain White Matter: Magnitude, Temporal Characteristics, and Age Effects. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2014, 34, 242-247.	2.4	105
8	Cerebrovascular reactivity mapping without gas challenges. <i>NeuroImage</i> , 2017, 146, 320-326.	2.1	101
9	Age-related differences in memory-encoding fMRI responses after accounting for decline in vascular reactivity. <i>NeuroImage</i> , 2013, 78, 415-425.	2.1	92
10	Triheptanoin for Glucose Transporter Type I Deficiency (G1D). <i>JAMA Neurology</i> , 2014, 71, 1255.	4.5	91
11	Age-related increase of resting metabolic rate in the human brain. <i>NeuroImage</i> , 2014, 98, 176-183.	2.1	89
12	Test-retest reproducibility of a rapid method to measure brain oxygen metabolism. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 675-681.	1.9	87
13	MRI techniques to measure arterial and venous cerebral blood volume. <i>NeuroImage</i> , 2019, 187, 17-31.	2.1	75
14	Multiparametric estimation of brain hemodynamics with MR fingerprinting ASL. <i>Magnetic Resonance in Medicine</i> , 2017, 78, 1812-1823.	1.9	73
15	Cerebral Blood Flow after Mild Traumatic Brain Injury: Associations between Symptoms and Post-Injury Perfusion. <i>Journal of Neurotrauma</i> , 2018, 35, 241-248.	1.7	72
16	Quantitative assessment of global cerebral metabolic rate of oxygen (CMRO <sub>2</sub> ) in neonates using MRI. <i>NMR in Biomedicine</i> , 2014, 27, 332-340.	1.6	70
17	Arterial spin labeling (ASL) perfusion MRI predicts cognitive function in elderly individuals: A 4-year longitudinal study. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 48, 449-458.	1.9	67
18	Amygdala Hyperactivity at Rest in Paranoid Individuals With Schizophrenia. <i>American Journal of Psychiatry</i> , 2015, 172, 784-792.	4.0	64

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19	Determination of spin compartment in arterial spin labeling MRI. <i>Magnetic Resonance in Medicine</i> , 2011, 65, 120-127.	1.9	57
20	MRI Mapping of Cerebrovascular Reactivity via Gas Inhalation Challenges. <i>Journal of Visualized Experiments</i> , 2014, , .	0.2	57
21	Bloodâ€œBrain Barrier Breakdown in Relationship to Alzheimer and Vascular Disease. <i>Annals of Neurology</i> , 2021, 90, 227-238.	2.8	57
22	A comparison of physiologic modulators of fMRI signals. <i>Human Brain Mapping</i> , 2013, 34, 2078-2088.	1.9	56
23	On improving the speed and reliability of $T_2$ -relaxationâ€œspinâ€œtagging (TRUST) MRI. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 198-204.	1.9	54
24	Does acute caffeine ingestion alter brain metabolism in young adults?. <i>NeuroImage</i> , 2015, 110, 39-47.	2.1	54
25	T1 and T2 values of human neonatal blood at 3 Tesla: Dependence on hematocrit, oxygenation, and temperature. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 1730-1735.	1.9	53
26	Optimization of phaseâ€œcontrast MRI for the quantification of wholeâ€œbrain cerebral blood flow. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 42, 1126-1133.	1.9	51
27	Physiologic underpinnings of negative BOLD cerebrovascular reactivity in brain ventricles. <i>NeuroImage</i> , 2013, 83, 505-512.	2.1	49
28	Sildenafil Improves Vascular and Metabolic Function in Patients with Alzheimerâ€™s Disease. <i>Journal of Alzheimer's Disease</i> , 2017, 60, 1351-1364.	1.2	48
29	Heterogeneous increases of regional cerebral blood flow during preterm brain development: Preliminary assessment with pseudo-continuous arterial spin labeled perfusion MRI. <i>NeuroImage</i> , 2017, 147, 233-242.	2.1	47
30	Vesselâ€œspecific quantification of blood oxygenation with $T_2$ -relaxationâ€œphaseâ€œcontrast MRI. <i>Magnetic Resonance in Medicine</i> , 2014, 71, 978-989.	1.9	45
31	Fast measurement of blood $T_1$ in the human carotid artery at 3T: Accuracy, precision, and reproducibility. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 2296-2302.	1.9	43
32	Multisite evaluations of a $T_2$ -relaxationâ€œspinâ€œtagging (TRUST) MRI technique to measure brain oxygenation. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 680-687.	1.9	42
33	Cerebrovascular Reactivity Mapping Using Resting-State BOLD Functional MRI in Healthy Adults and Patients with Moyamoya Disease. <i>Radiology</i> , 2021, 299, 419-425.	3.6	40
34	Association of cerebrovascular reactivity and Alzheimer pathologic markers with cognitive performance. <i>Neurology</i> , 2020, 95, e962-e972.	1.5	39
35	Measurement of cerebral blood flow using phase contrast magnetic resonance imaging and duplex ultrasonography. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2017, 37, 541-549.	2.4	36
36	Transcranial magnetic stimulation and environmental enrichment enhances cortical excitability and functional outcomes after traumatic brain injury. <i>Brain Stimulation</i> , 2018, 11, 1306-1313.	0.7	35

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37	Evaluation of cerebrovascular reserve in patients with cerebrovascular diseases using resting-state MRI: A feasibility study. <i>Magnetic Resonance Imaging</i> , 2019, 59, 46-52.	1.0	34
38	ASLâ€MRICloud: An online tool for the processing of ASL MRI data. <i>NMR in Biomedicine</i> , 2019, 32, e4051.	1.6	33
39	Brain Oxygen Extraction Is Differentially Altered by Alzheimer's and Vascular Diseases. <i>Journal of Magnetic Resonance Imaging</i> , 2020, 52, 1829-1837.	1.9	33
40	Perfusion deficit to cholinergic challenge in veterans with Gulf War Illness. <i>NeuroToxicology</i> , 2011, 32, 242-246.	1.4	32
41	Multiparametric imaging of brain hemodynamics and function using gas-inhalation MRI. <i>NeuroImage</i> , 2017, 146, 715-723.	2.1	32
42	Dependence of blood T <sub>2</sub> on oxygenation at 7 T: In vitro calibration and in vivo application. <i>Magnetic Resonance in Medicine</i> , 2014, 71, 2035-2042.	1.9	30
43	Accounting for the role of hematocrit in betweenâ€subject variations of MRIâ€derived baseline cerebral hemodynamic parameters and functional BOLD responses. <i>Human Brain Mapping</i> , 2018, 39, 344-353.	1.9	29
44	Discovery and replication of cerebral blood flow differences in major depressive disorder. <i>Molecular Psychiatry</i> , 2020, 25, 1500-1510.	4.1	28
45	Quantification of wholeâ€brain oxygenation extraction fraction and cerebral metabolic rate of oxygen consumption in adults with sickle cell anemia using individual T <sub>2</sub> -based oxygenation calibrations. <i>Magnetic Resonance in Medicine</i> , 2020, 83, 1066-1080.	1.9	28
46	Comparison of relative cerebral blood flow maps using pseudoâ€continuous arterial spin labeling and single photon emission computed tomography. <i>NMR in Biomedicine</i> , 2012, 25, 779-786.	1.6	25
47	Acute effect of glucose on cerebral blood flow, blood oxygenation, and oxidative metabolism. <i>Human Brain Mapping</i> , 2015, 36, 707-716.	1.9	24
48	The association between BOLD-based cerebrovascular reactivity (CVR) and end-tidal CO <sub>2</sub> in healthy subjects. <i>NeuroImage</i> , 2020, 207, 116365.	2.1	23
49	Cerebral oxygen metabolism during and after therapeutic hypothermia in neonatal hypoxicâ€ischemic encephalopathy: a feasibility study using magnetic resonance imaging. <i>Pediatric Radiology</i> , 2019, 49, 224-233.	1.1	21
50	Persistent alterations in cerebrovascular reactivity in response to hypercapnia following pediatric mild traumatic brain injury. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2020, 40, 2491-2504.	2.4	21
51	Cerebrovascular reactivity mapping using intermittent breath modulation. <i>NeuroImage</i> , 2020, 215, 116787.	2.1	21
52	Huntingtin silencing delays onset and slows progression of Huntingtonâ€™s disease: a biomarker study. <i>Brain</i> , 2021, 144, 3101-3113.	3.7	21
53	Validation of VASO cerebral blood volume measurement with positron emission tomography. <i>Magnetic Resonance in Medicine</i> , 2011, 65, 744-749.	1.9	19
54	MRI assessment of cerebral oxygen metabolism in cocaine-addicted individuals: hypoactivity and dose dependence. <i>NMR in Biomedicine</i> , 2014, 27, 726-732.	1.6	18

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55	Cortical amyloid burden and age moderate hippocampal activity in cognitively-normal adults. <i>NeuroImage: Clinical</i> , 2016, 12, 78-84.	1.4	18
56	Spatial distribution of flow and oxygenation in the cerebral venous drainage system. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 47, 1091-1098.	1.9	18
57	Automatic and Reproducible Positioning of Phase-Contrast MRI for the Quantification of Global Cerebral Blood Flow. <i>PLoS ONE</i> , 2014, 9, e95721.	1.1	17
58	Non-invasive assessment of neonatal brain oxygen metabolism: A review of newly available techniques. <i>Early Human Development</i> , 2014, 90, 695-701.	0.8	17
59	Cross-vendor harmonization of T <sub>2</sub> -relaxation-under-spin-tagging (TRUST) MRI for the assessment of cerebral venous oxygenation. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 1125-1131.	1.9	17
60	Assessment of cerebral blood flow in neonates and infants: A phase-contrast MRI study. <i>NeuroImage</i> , 2019, 185, 926-933.	2.1	17
61	Cerebral perfusion differences in women currently with and recovered from anorexia nervosa. <i>Psychiatry Research - Neuroimaging</i> , 2015, 232, 175-183.	0.9	16
62	Multi-band MR fingerprinting (MRF) ASL imaging using artificial neural network trained with high-fidelity experimental data. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 1974-1985.	1.9	15
63	Static and dynamic functional connectivity analysis of cerebrovascular reactivity: An fMRI study. <i>Brain and Behavior</i> , 2020, 10, e01516.	1.0	15
64	Estimation of brain functional connectivity from hypercapnia BOLD MRI data: Validation in a lifespan cohort of 170 subjects. <i>NeuroImage</i> , 2019, 186, 455-463.	2.1	14
65	The impact of hyperoxia on brain activity: A resting-state and task-evoked electroencephalography (EEG) study. <i>PLoS ONE</i> , 2017, 12, e0176610.	1.1	14
66	Normal variations in brain oxygen extraction fraction are partly attributed to differences in end-tidal CO <sub>2</sub> . <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2020, 40, 1492-1500.	2.4	13
67	Quantitative Cerebrovascular Reactivity in Normal Aging: Comparison Between Phase-Contrast and Arterial Spin Labeling MRI. <i>Frontiers in Neurology</i> , 2020, 11, 758.	1.1	13
68	Hemodynamic and Metabolic Assessment of Neonates With Punctate White Matter Lesions Using Phase-Contrast MRI and T2-Relaxation-Under-Spin-Tagging (TRUST) MRI. <i>Frontiers in Physiology</i> , 2018, 9, 233.	1.3	12
69	Quantitative assessment of cerebral venous blood T <sub>2</sub> in mouse at 11.7T: Implementation, optimization, and age effect. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 521-528.	1.9	11
70	Three-dimensional mapping of brain venous oxygenation using oximetry. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 1304-1313.	1.9	11
71	Vessel-specific quantification of neonatal cerebral venous oxygenation. <i>Magnetic Resonance in Medicine</i> , 2019, 82, 1129-1139.	1.9	11
72	Optimization of phase-contrast MRI for the estimation of global cerebral blood flow of mice at 11.7T. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 2566-2575.	1.9	11

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73	MR fingerprinting ASL: Sequence characterization and comparison with dynamic susceptibility contrast (DSC) MRI. <i>NMR in Biomedicine</i> , 2020, 33, e4202.	1.6	11
74	Fractional anisotropy from diffusion tensor imaging correlates with acute astrocyte and myelin swelling in neonatal swine models of excitotoxic and hypoxic-ischemic brain injury. <i>Journal of Comparative Neurology</i> , 2021, 529, 2750-2770.	0.9	10
75	Age-Related Tortuosity of Carotid and Vertebral Arteries: Quantitative Evaluation With MR Angiography. <i>Frontiers in Neurology</i> , 2022, 13, 858805.	1.1	10
76	Simultaneous multi-slice (SMS) acquisition enhances the sensitivity of hemodynamic mapping using gas challenges. <i>NMR in Biomedicine</i> , 2016, 29, 1511-1518.	1.6	9
77	Mean Diffusivity in Striatum Correlates With Acute Neuronal Death but Not Lesser Neuronal Injury in a Pilot Study of Neonatal Piglets With Encephalopathy. <i>Journal of Magnetic Resonance Imaging</i> , 2020, 52, 1216-1226.	1.9	9
78	Multi-Parametric Evaluation of Cerebral Hemodynamics in Neonatal Piglets Using Non-Contrast-Enhanced Magnetic Resonance Imaging Methods. <i>Journal of Magnetic Resonance Imaging</i> , 2021, 54, 1053-1065.	1.9	9
79	Hemodynamic and metabolic changes during hypercapnia with normoxia and hyperoxia using pCASL and TRUST MRI in healthy adults. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2022, 42, 861-875.	2.4	8
80	Blood-brain barrier permeability in response to caffeine challenge. <i>Magnetic Resonance in Medicine</i> , 2022, 88, 2259-2266.	1.9	8
81	Longitudinal changes in brain oxygen extraction fraction (OEF) in older adults: Relationship to markers of vascular and Alzheimer's pathology. <i>Alzheimer's and Dementia</i> , 2023, 19, 569-577.	0.4	8
82	Detrimental effect of systemic vascular risk factors on brain hemodynamic function assessed with MRI. <i>Neuroradiology Journal</i> , 2018, 31, 253-261.	0.6	7
83	The neural-vascular basis of age-related processing speed decline. <i>Psychophysiology</i> , 2021, 58, e13845.	1.2	7
84	Multi-vendor and multisite evaluation of cerebrovascular reactivity mapping using hypercapnia challenge. <i>NeuroImage</i> , 2021, 245, 118754.	2.1	7
85	Imaging Blood-Brain Barrier Permeability Through MRI in Pediatric Sickle Cell Disease: A Feasibility Study. <i>Journal of Magnetic Resonance Imaging</i> , 2022, 55, 1551-1558.	1.9	6
86	Characterization of MRI techniques to assess neonatal brain oxygenation and blood flow. <i>NMR in Biomedicine</i> , 2019, 32, e4103.	1.6	5
87	Quantitative validation of MRI mapping of cerebral venous oxygenation with direct blood sampling: A graded study in piglets. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 1445-1453.	1.9	5
88	Relationships between cerebrovascular reactivity, visual-evoked functional activity, and resting-state functional connectivity in the visual cortex and basal forebrain in glaucoma. , 2021, 2021, 4037-4040.		5
89	OUP accepted manuscript. <i>Cerebral Cortex</i> , 2022, , .	1.6	4
90	Longitudinal Changes in Global Cerebral Blood Flow in Cognitively Normal Older Adults: A Phase-Contrast MRI Study. <i>Journal of Magnetic Resonance Imaging</i> , 2022, 56, 1538-1545.	1.9	4

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91	Non-contrast hemodynamic imaging of Moyamoya disease with MR fingerprinting ASL: A feasibility study. <i>Magnetic Resonance Imaging</i> , 2022, 88, 116-122.	1.0	4
92	Brain Oxygen Extraction and Metabolism in Pediatric Patients With Sickle Cell Disease: Comparison of Four Calibration Models. <i>Frontiers in Physiology</i> , 2022, 13, 814979.	1.3	3
93	O1-07-05: IMPACT OF B-AMYLOID BURDEN ON BRAIN PERFUSION AND VASCULAR REACTIVITY IN NORMAL AGING. , 2014, 10, P143-P144.		1
94	Mutant G2019S-LRRK2 Induces Abnormalities in Arteriolar Cerebral Blood Volume in Mouse Brains: An MRI Study. <i>Neurodegenerative Diseases</i> , 2020, 20, 65-72.	0.8	1
95	Cerebrovascular Reactivity (CVR) in Aging, Cognitive Impairment, and Dementia. <i>Neuromethods</i> , 2022, , 103-118.	0.2	0