Chunlei Liu

List of Publications by Year
in descending order

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122 papers	7,404 citations	61984 43 h-index	62596 80 g-index
126 all docs	126 docs citations	126 times ranked	6780 citing authors

#	Article	IF	Citations
1	Quantitative susceptibility mapping of human brain reflects spatial variation in tissue composition. NeuroImage, 2011, 55, 1645-1656.	4.2	487
2	Susceptibility-weighted imaging and quantitative susceptibility mapping in the brain. Journal of Magnetic Resonance Imaging, 2015, 42, 23-41.	3.4	407
3	Whole brain susceptibility mapping using compressed sensing. Magnetic Resonance in Medicine, 2012, 67, 137-147.	3.0	328
4	Susceptibility tensor imaging. Magnetic Resonance in Medicine, 2010, 63, 1471-1477.	3.0	300
5	A method for estimating and removing streaking artifacts in quantitative susceptibility mapping. NeuroImage, 2015, 108, 111-122.	4.2	256
6	Protective astrogenesis from the SVZ niche after injury is controlled by Notch modulator Thbs4. Nature, 2013, 497, 369-373.	27.8	244
7	Integrated Laplacianâ€based phase unwrapping and background phase removal for quantitative susceptibility mapping. NMR in Biomedicine, 2014, 27, 219-227.	2.8	239
8	Characterizing non-gaussian diffusion by using generalized diffusion tensors. Magnetic Resonance in Medicine, 2004, 51, 924-937.	3.0	224
9	Selfâ€navigated interleaved spiral (SNAILS): Application to highâ€resolution diffusion tensor imaging. Magnetic Resonance in Medicine, 2004, 52, 1388-1396.	3.0	214
10	Differential developmental trajectories of magnetic susceptibility in human brain gray and white matter over the lifespan. Human Brain Mapping, 2014, 35, 2698-2713.	3.6	208
11	High-field (9.4T) MRI of brain dysmyelination by quantitative mapping of magnetic susceptibility. NeuroImage, 2011, 56, 930-938.	4.2	199
12	Magnetic susceptibility anisotropy of human brain in vivo and its molecular underpinnings. NeuroImage, 2012, 59, 2088-2097.	4.2	194
13	Regionâ€specific disturbed iron distribution in early idiopathic <scp>P</scp>arkinson's disease measured by quantitative susceptibility mapping. Human Brain Mapping, 2015, 36, 4407-4420.	3.6	181
14	Streaking artifact reduction for quantitative susceptibility mapping of sources with large dynamic range. NMR in Biomedicine, 2015, 28, 1294-1303.	2.8	175
15	Fast and tissue-optimized mapping of magnetic susceptibility and T2* with multi-echo and multi-shot spirals. NeuroImage, 2012, 59, 297-305.	4.2	147
16	Quantitative Susceptibility Mapping: Contrast Mechanisms and Clinical Applications. Tomography, 2015, 1, 3-17.	1.8	129
17	Regionally progressive accumulation of iron in Parkinson's disease as measured by quantitative susceptibility mapping. NMR in Biomedicine, 2017, 30, e3489.	2.8	122
18	Imaging beta amyloid aggregation and iron accumulation in Alzheimer's disease using quantitative susceptibility mapping MRI. NeuroImage, 2019, 191, 176-185.	4.2	122

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19	Effects of chronic mild traumatic brain injury on white matter integrity in Iraq and Afghanistan war veterans. Human Brain Mapping, 2013, 34, 2986-2999.	3.6	107
20	Longitudinal atlas for normative human brain development and aging over the lifespan using quantitative susceptibility mapping. NeuroImage, 2018, 171, 176-189.	4.2	95
21	Simultaneous phase correction and SENSE reconstruction for navigated multi-shot DWI with non-cartesian k-space sampling. Magnetic Resonance in Medicine, 2005, 54, 1412-1422.	3.0	92
22	Augmented generalized SENSE reconstruction to correct for rigid body motion. Magnetic Resonance in Medicine, 2007, 57, 90-102.	3.0	84
23	3D fiber tractography with susceptibility tensor imaging. NeuroImage, 2012, 59, 1290-1298.	4.2	82
24	Foundations of advanced magnetic resonance imaging. NeuroRx, 2005, 2, 167-196.	6.0	73
25	Prefrontal Plasticity and Stress Inoculation-Induced Resilience. Developmental Neuroscience, 2009, 31, 293-299.	2.0	72
26	The Alzheimer Structural Connectome: Changes in Cortical Network Topology with Increased Amyloid Plaque Burden. Radiology, 2014, 273, 175-184.	7.3	71
27	An interferon-Î²-resistant and NLRP3 inflammasomeâ€“independent subtype of EAE with neuronal damage. Nature Neuroscience, 2016, 19, 1599-1609.	14.8	70
28	Consensus-based technical recommendations for clinical translation of renal BOLD MRI. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2020, 33, 199-215.	2.0	68
29	Decoding COVID-19 pneumonia: comparison of deep learning and radiomics CT image signatures. European Journal of Nuclear Medicine and Molecular Imaging, 2021, 48, 1478-1486.	6.4	66
30	Exploring the origins of echo-time-dependent quantitative susceptibility mapping (QSM) measurements in healthy tissue and cerebral microbleeds. NeuroImage, 2017, 149, 98-113.	4.2	64
31	Radioprotection of the Brain White Matter by Mn(III) N-Butoxyethylpyridylporphyrinâ€“Based Superoxide Dismutase Mimic MnTnBuOE-2-PyP5+. Molecular Cancer Therapeutics, 2015, 14, 70-79.	4.1	60
32	Susceptibility tensor imaging (STI) of the brain. NMR in Biomedicine, 2017, 30, e3540.	2.8	59
33	Quantitative Susceptibility Mapping at 3 T and 1.5 T. Investigative Radiology, 2015, 50, 522-530.	6.2	58
34	Investigating magnetic susceptibility of human knee joint at 7 Tesla. Magnetic Resonance in Medicine, 2017, 78, 1933-1943.	3.0	54
35	Differential microstructural and morphological abnormalities in mild cognitive impairment and <scp>A</scp>lzheimer's disease: Evidence from cortical and deep gray matter. Human Brain Mapping, 2017, 38, 2495-2508.	3.6	54
36	Multi-atlas tool for automated segmentation of brain gray matter nuclei and quantification of their magnetic susceptibility. NeuroImage, 2019, 191, 337-349.	4.2	54

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37	Rapid multi-orientation quantitative susceptibility mapping. NeuroImage, 2016, 125, 1131-1141.	4.2	52
38	Parallel reconstruction using null operations. Magnetic Resonance in Medicine, 2011, 66, 1241-1253.	3.0	51
39	Temperature-activated ion channels in neural crest cells confer maternal feverâ€“associated birth defects. Science Signaling, 2017, 10, .	3.6	51
40	Susceptibility tensor imaging of the kidney and its microstructural underpinnings. Magnetic Resonance in Medicine, 2015, 73, 1270-1281.	3.0	50
41	Quantitative magnetic susceptibility of the developing mouse brain reveals microstructural changes in the white matter. NeuroImage, 2014, 88, 134-142.	4.2	49
42	Magnetic susceptibility of brain iron is associated with childhood spatial IQ. NeuroImage, 2016, 132, 167-174.	4.2	47
43	Quantitative susceptibility mapping of kidney inflammation and fibrosis in type 1 angiotensin receptorâ€deficient mice. NMR in Biomedicine, 2013, 26, 1853-1863.	2.8	45
44	Learning-based single-step quantitative susceptibility mapping reconstruction without brain extraction. NeuroImage, 2019, 202, 116064.	4.2	44
45	Imaging whole-brain cytoarchitecture of mouse with MRI-based quantitative susceptibility mapping. NeuroImage, 2016, 137, 107-115.	4.2	43
46	Dentate nucleus iron deposition is a potential biomarker for tremorâ€dominant Parkinson's disease. NMR in Biomedicine, 2017, 30, e3554.	2.8	42
47	Correlation of Apparent Diffusion Coefficient and Fractional Anisotropy Values in the Developing Infant Brain. American Journal of Roentgenology, 2010, 195, W456-W462.	2.2	41
48	Association between increased magnetic susceptibility of deep gray matter nuclei and decreased motor function in healthy adults. NeuroImage, 2015, 105, 45-52.	4.2	41
49	Singleâ€step nonlinear diffusion tensor estimation in the presence of microscopic and macroscopic motion. Magnetic Resonance in Medicine, 2008, 59, 1138-1150.	3.0	40
50	Susceptibility mapâ€weighted imaging (SMWI) for neuroimaging. Magnetic Resonance in Medicine, 2014, 72, 337-346.	3.0	39
51	Parallel imaging reconstruction for arbitrary trajectories using kâ€space sparse matrices (kSPA). Magnetic Resonance in Medicine, 2007, 58, 1171-1181.	3.0	38
52	Simultaneous imaging of in vivo conductivity and susceptibility. Magnetic Resonance in Medicine, 2014, 71, 1144-1150.	3.0	37
53	Magnetic susceptibility anisotropy of myocardium imaged by cardiovascular magnetic resonance reflects the anisotropy of myocardial filament Î±-helix polypeptide bonds. Journal of Cardiovascular Magnetic Resonance, 2015, 17, 60.	3.3	37
54	Joint 2D and 3D phase processing for quantitative susceptibility mapping: application to 2D echoâ€planar imaging. NMR in Biomedicine, 2017, 30, e3501.	2.8	36

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55	Neonate and infant brain development from birth to 2 years assessed using MRI-based quantitative susceptibility mapping. NeuroImage, 2019, 185, 349-360.	4.2	36
56	White Matter Changes Related to Subconcussive Impact Frequency during a Single Season of High School Football. American Journal of Neuroradiology, 2018, 39, 245-251.	2.4	35
57	Iron-related nigral degeneration influences functional topology mediated by striatal dysfunction in Parkinson's disease. Neurobiology of Aging, 2019, 75, 83-97.	3.1	35
58	Susceptibility tensor imaging and tractography of collagen fibrils in the articular cartilage. Magnetic Resonance in Medicine, 2017, 78, 1683-1690.	3.0	34
59	Advances in Magnetic Resonance Neuroimaging. Neurologic Clinics, 2009, 27, 1-19.	1.8	33
60	Distribution of brain iron accrual in adolescence: Evidence from crossâ€sectional and longitudinal analysis. Human Brain Mapping, 2019, 40, 1480-1495.	3.6	33
61	Limitations of apparent diffusion coefficient-based models in characterizing non-gaussian diffusion. Magnetic Resonance in Medicine, 2005, 54, 419-428.	3.0	32
62	Prenatal alcohol exposure reduces magnetic susceptibility contrast and anisotropy in the white matter of mouse brains. NeuroImage, 2014, 102, 748-755.	4.2	32
63	Quantitative assessment of gadolinium deposition in dentate nucleus using quantitative susceptibility mapping. Journal of Magnetic Resonance Imaging, 2017, 45, 1352-1358.	3.4	31
64	Decompose quantitative susceptibility mapping (QSM) to sub-voxel diamagnetic and paramagnetic components based on gradient-echo MRI data. NeuroImage, 2021, 242, 118477.	4.2	31
65	In vivo generalized diffusion tensor imaging (GDTI) using higherâ€order tensors (HOT). Magnetic Resonance in Medicine, 2010, 63, 243-252.	3.0	30
66	Quantitative susceptibility mapping as a biomarker for evaluating white matter alterations in Parkinsonâ€™s disease. Brain Imaging and Behavior, 2019, 13, 220-231.	2.1	30
67	Association of the ZNF804A gene polymorphism rs1344706 with white matter density changes in Chinese schizophrenia. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2012, 36, 122-127.	4.8	28
68	Lipid Oxidation Induced by RF Waves and Mediated by Ferritin Iron Causes Activation of Ferritin-Tagged Ion Channels. Cell Reports, 2020, 30, 3250-3260.e7.	6.4	28
69	MRI tools for assessment of microstructure and nephron function of the kidney. American Journal of Physiology - Renal Physiology, 2016, 311, F1109-F1124.	2.7	27
70	Quantitative susceptibility mapping in combination with water-fat separation for simultaneous liver iron and fat fraction quantification. European Radiology, 2018, 28, 3494-3504.	4.5	27
71	Generalized Diffusion Tensor Imaging (GDTI): A Method for Characterizing and Imaging Diffusion Anisotropy Caused by Non-Gaussian Diffusion. Israel Journal of Chemistry, 2010, 43, 145-154.	2.3	25
72	Imaging neural architecture of the brain based on its multipole magnetic response. NeuroImage, 2013, 67, 193-202.	4.2	25

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73	Longitudinal data for magnetic susceptibility of normative human brain development and aging over the lifespan. Data in Brief, 2018, 20, 623-631.	1.0	23
74	Imaging the Centromedian Thalamic Nucleus Using Quantitative Susceptibility Mapping. Frontiers in Human Neuroscience, 2019, 13, 447.	2.0	23
75	Magnetic susceptibility anisotropy outside the central nervous system. NMR in Biomedicine, 2017, 30, e3544.	2.8	22
76	Probing demyelination and remyelination of the cuprizone mouse model using multimodality MRI. Journal of Magnetic Resonance Imaging, 2019, 50, 1852-1865.	3.4	21
77	Dynamic contrast-enhanced quantitative susceptibility mapping with ultrashort echo time MRI for evaluating renal function. American Journal of Physiology - Renal Physiology, 2016, 310, F174-F182.	2.7	20
78	Improved Neuroimaging Atlas of the Dentate Nucleus. Cerebellum, 2017, 16, 951-956.	2.5	20
79	Brain MRI with Quantitative Susceptibility Mapping: Relationship to CT Attenuation Values. Radiology, 2020, 294, 600-609.	7.3	20
80	MoDL-QSM: Model-based deep learning for quantitative susceptibility mapping. NeuroImage, 2021, 240, 118376.	4.2	20
81	No association of ZNF804A rs1344706 with white matter integrity in schizophrenia: A tract-based spatial statistics study. Neuroscience Letters, 2013, 532, 64-69.	2.1	19
82	Microstructural origins of gadoliniumâ€enhanced susceptibility contrast and anisotropy. Magnetic Resonance in Medicine, 2014, 72, 1702-1711.	3.0	19
83	Microstructural alterations of cortical and deep gray matter over a season of high school football revealed by diffusion kurtosis imaging. Neurobiology of Disease, 2018, 119, 79-87.	4.4	19
84	Quantitative susceptibility mapping of articular cartilage in patients with osteoarthritis at 3T. Journal of Magnetic Resonance Imaging, 2019, 49, 1665-1675.	3.4	19
85	Probing white-matter microstructure with higher-order diffusion tensors and susceptibility tensor MRI. Frontiers in Integrative Neuroscience, 2013, 7, 11.	2.1	18
86	Plasticity in deep and superficial white matter: a DTI study in world class gymnasts. Brain Structure and Function, 2018, 223, 1849-1862.	2.3	18
87	Comparison of Magnetic Susceptibility Tensor and Diffusion Tensor of the Brain. Journal of Neuroscience and Neuroengineering, 2013, 2, 431-440.	0.2	18
88	Parallel spectroscopic imaging reconstruction with arbitrary trajectories using kâ€space sparse matrices. Magnetic Resonance in Medicine, 2009, 61, 267-272.	3.0	16
89	Accelerating quantitative susceptibility imaging acquisition using compressed sensing. Physics in Medicine and Biology, 2018, 63, 245002.	3.0	16
90	Multivariate MR biomarkers better predict cognitive dysfunction in mouse models of Alzheimer's disease. Magnetic Resonance Imaging, 2019, 60, 52-67.	1.8	16

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91	Toward a marker of upper motor neuron impairment in amyotrophic lateral sclerosis: A fully automatic investigation of the magnetic susceptibility in the precentral cortex. European Journal of Radiology, 2020, 124, 108815.	2.6	15
92	Generalized parameter estimation in multi-echo gradient-echo-based chemical species separation. Quantitative Imaging in Medicine and Surgery, 2020, 10, 554-567.	2.0	15
93	The effect of DISC1 on regional gray matter density of schizophrenia in Han Chinese population. Neuroscience Letters, 2012, 517, 21-24.	2.1	14
94	Quantitative susceptibility mapping (QSM) as a means to monitor cerebral hematoma treatment. Journal of Magnetic Resonance Imaging, 2018, 48, 907-915.	3.4	14
95	MRI gradient-echo phase contrast of the brain at ultra-short TE with off-resonance saturation. NeuroImage, 2018, 175, 1-11.	4.2	14
96	Precise targeting of the globus pallidus internus with quantitative susceptibility mapping for deep brain stimulation surgery. Journal of Neurosurgery, 2020, 133, 1605-1611.	1.6	14
97	Joint eigenvector estimation from mutually anisotropic tensors improves susceptibility tensor imaging of the brain, kidney, and heart. Magnetic Resonance in Medicine, 2017, 77, 2331-2346.	3.0	13
98	Quantitative Susceptibility Mapping of the Hippocampal Fimbria in Alzheimer's Disease. Journal of Magnetic Resonance Imaging, 2021, 53, 1823-1832.	3.4	13
99	Dynamic and inherent B₀ correction for DTI using stimulated echo spiral imaging. Magnetic Resonance in Medicine, 2014, 71, 1044-1053.	3.0	12
100	Cortical iron mediates <scp>ageâ€related</scp> decline in fluid cognition. Human Brain Mapping, 2022, 43, 1047-1060.	3.6	12
101	Oscillation-specific nodal alterations in early to middle stages Parkinsonâ€™s disease. Translational Neurodegeneration, 2019, 8, 36.	8.0	11
102	Imaging microstructure with diffusion and susceptibility MR: neuronal density correlation in Disruptedâ€inâ€Schizophreniaâ€1 mutant mice. NMR in Biomedicine, 2020, 33, e4365.	2.8	11
103	Asymmetrical nigral iron accumulation in Parkinsonâ€™s disease with motor asymmetry: an explorative, longitudinal and test-retest study. Aging, 2020, 12, 18622-18634.	3.1	10
104	Serum Ceruloplasmin Depletion is Associated With Magnetic Resonance Evidence of Widespread Accumulation of Brain Iron in Parkinson's Disease. Journal of Magnetic Resonance Imaging, 2021, 54, 1098-1106.	3.4	9
105	Feasibility of Imaging Tissue Electrical Conductivity by Switching Field Gradients with MRI. Tomography, 2015, 1, 125-135.	1.8	9
106	Imaging diamagnetic susceptibility of collagen in hepatic fibrosis using susceptibility tensor imaging. Magnetic Resonance in Medicine, 2020, 83, 1322-1330.	3.0	8
107	Elevated homocysteine and differential risks of the renal function decline in hypertensive patients. Clinical and Experimental Hypertension, 2020, 42, 565-570.	1.3	8
108	Multiphoton magnetic resonance in imaging: A classical description and implementation. Magnetic Resonance in Medicine, 2020, 84, 1184-1197.	3.0	8

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109	DTI Tractâ€Based Quantitative Susceptibility Mapping: An Initial Feasibility Study to Investigate the Potential Role of Myelination in Brain Connectivity Change in Cerebral Palsy Patients During Autologous Cord Blood Cell Therapy Using a Rotationallyâ€Invariant Quantitative Measure. Journal of Magnetic Resonance Imaging, 2021, 53, 251-258.	3.4	8
110	Predictive value of thrombus susceptibility for cardioembolic stroke by quantitative susceptibility mapping. Quantitative Imaging in Medicine and Surgery, 2022, 12, 550-557.	2.0	8
111	Multimodal integration of diffusion MRI for better characterization of tissue biology. NMR in Biomedicine, 2019, 32, e3939.	2.8	6
112	Slidingâ€window sensitivity encoding (SENSE) calibration for reducing noise in functional MRI (fMRI). Magnetic Resonance in Medicine, 2008, 60, 1090-1103.	3.0	5
113	Evaluating methods and protocols of ferritin-based magnetogenetics. IScience, 2021, 24, 103094.	4.1	5
114	Asymmetric susceptibility tensor imaging. Magnetic Resonance in Medicine, 2021, 86, 2266-2275.	3.0	4
115	Auto-Calibrated Parallel Imaging Reconstruction for Arbitrary Trajectories Using ${f k}$-Space Sparse Matrices (kSPA). IEEE Transactions on Medical Imaging, 2010, 29, 950-959.	8.9	3
116	Application of Low-pass & High-pass reconstruction for improving the performance of the POCS based algorithm. , 2011, , .		3
117	Editorial for special issue on MRI phase contrast and quantitative susceptibility mapping. NMR in Biomedicine, 2017, 30, e3707.	2.8	2
118	DiSpect: Displacement spectrum imaging of flow and tissue perfusion using spinâ€labeling and stimulated echoes. Magnetic Resonance in Medicine, 2021, 86, 2468-2481.	3.0	2
119	Regularized Asymmetric Susceptibility Tensor Imaging in the Human Brain in Vivo. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 4508-4518.	6.3	2
120	Foundations of advanced magnetic resonance imaging. Neurotherapeutics, 2005, 2, 167-196.	4.4	1
121	Basilar artery thrombus magnetic susceptibility for cardioembolic stroke identification. Quantitative Imaging in Medicine and Surgery, 2022, 12, 1566-1571.	2.0	0
122	Involvement of the crosstalk between Nrf2 and NF-Î¹B pathways regulated by SIRT1 in myocardial ischemia/reperfusion injury. International Journal of Cardiology, 2022, 355, 44.	1.7	0