Hui Zhang

List of Publications by Year
in descending order

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128 papers	11,376 citations	47409 49 h-index	40945 97 g-index
143 all docs	143 docs citations	143 times ranked	12012 citing authors

#	Article	IF	Citations
1	Neurite Orientation Dispersion and Density Imaging in Psychiatric Disorders: A Systematic Literature Review and a Technical Note. Biological Psychiatry Global Open Science, 2023, 3, 10-21.	1.0	17
2	Training data distribution significantly impacts the estimation of tissue microstructure with machine learning. Magnetic Resonance in Medicine, 2022, 87, 932-947.	1.9	35
3	Impaired corticospinal tract in chronic ankle instability: A diffusion tensor imaging (DTI) and neurite orientation dispersion and density imaging (NODDI) study at 7.0 Tesla. Journal of Science and Medicine in Sport, 2022, 25, 649-654.	0.6	6
4	Optimization of the MR imaging pipeline using simulation. , 2022, , 165-193.		0
5	Neurofilament light-associated connectivity in young-adult Huntingtonâ€™s disease is related to neuronal genes. Brain, 2022, 145, 3953-3967.	3.7	3
6	Deep learningâ€based method for reducing residual motion effects in diffusion parameter estimation. Magnetic Resonance in Medicine, 2021, 85, 2278-2293.	1.9	7
7	Diffusion magnetic resonance imaging assessment of regional white matter maturation in preterm neonates. Neuroradiology, 2021, 63, 573-583.	1.1	10
8	Machine learning based white matter models with permeability: An experimental study in cuprizone treated in-vivo mouse model of axonal demyelination. NeuroImage, 2021, 224, 117425.	2.1	12
9	Traumatic brain injury: a comparison of diffusion and volumetric magnetic resonance imaging measures. Brain Communications, 2021, 3, fcab006.	1.5	8
10	Altered iron and myelin in premanifest Huntington's Disease more than 20 years before clinical onset: Evidence from the cross-sectional HD Young Adult Study. EBioMedicine, 2021, 65, 103266.	2.7	20
11	Ventralis intermedius nucleus anatomical variability assessment by MRI structural connectivity. NeuroImage, 2021, 238, 118231.	2.1	8
12	On the generalizability of diffusion MRI signal representations across acquisition parameters, sequences and tissue types: Chronicles of the MEMENTO challenge. NeuroImage, 2021, 240, 118367.	2.1	10
13	Comparative analysis of signal models for microscopic fractional anisotropy estimation using q-space trajectory encoding. NeuroImage, 2021, 242, 118445.	2.1	6
14	Repeatability of Soma and Neurite Metrics in Cortical and Subcortical Grey Matter. Mathematics and Visualization, 2021, , 135-145.	0.4	2
15	Task-driven assessment of experimental designs in diffusion MRI: A computational framework. PLoS ONE, 2021, 16, e0258442.	1.1	0
16	Loss and dispersion of superficial white matter in Alzheimerâ€™s disease: a diffusion MRI study. Brain Communications, 2021, 3, fcab272.	1.5	18
17	Maternal Prenatal Stress Is Associated With Altered Uncinate Fasciculus Microstructure in Premature Neonates. Biological Psychiatry, 2020, 87, 559-569.	0.7	55
18	Reduced neurite density in the brain and cervical spinal cord in relapsingâ€“remitting multiple sclerosis: A NODDI study. Multiple Sclerosis Journal, 2020, 26, 1647-1657.	1.4	48

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19	Characterizing White Matter in Huntington's Disease. Movement Disorders Clinical Practice, 2020, 7, 52-60.	0.8	20
20	ConFiG: Contextual Fibre Growth to generate realistic axonal packing for diffusion MRI simulation. NeuroImage, 2020, 220, 117107.	2.1	21
21	An informationâ€based comparison of diffusion attenuation models in normal and inflamed bone marrow. NMR in Biomedicine, 2020, 33, e4390.	1.6	3
22	Measuring cortical mean diffusivity to assess early microstructural cortical change in presymptomatic familial Alzheimerâ€™s disease. Alzheimer's Research and Therapy, 2020, 12, 112.	3.0	18
23	MTE-NODDI: Multi-TE NODDI for disentangling non-T2-weighted signal fractions from compartment-specific T2 relaxation times. NeuroImage, 2020, 217, 116906.	2.1	47
24	Biological and clinical characteristics of gene carriers far from predicted onset in the Huntington's disease Young Adult Study (HD-YAS): a cross-sectional analysis. Lancet Neurology, The, 2020, 19, 502-512.	4.9	122
25	SANDI: A compartment-based model for non-invasive apparent soma and neurite imaging by diffusion MRI. NeuroImage, 2020, 215, 116835.	2.1	155
26	Different patterns of cortical maturation before and after 38 weeks gestational age demonstrated by diffusion MRI in vivo. NeuroImage, 2019, 185, 764-775.	2.1	73
27	Diffusion Tensor Model links to Neurite Orientation Dispersion and Density Imaging at high b-value in Cerebral Cortical Gray Matter. Scientific Reports, 2019, 9, 12246.	1.6	49
28	Optimizing the intrinsic parallel diffusivity in NODDI: An extensive empirical evaluation. PLoS ONE, 2019, 14, e0217118.	1.1	70
29	Contextual Fibre Growth to Generate Realistic Axonal Packing for Diffusion MRI Simulation. Lecture Notes in Computer Science, 2019, , 429-440.	1.0	2
30	Connectivity between the visual word form area and the parietal lobe improves after the first year of reading instruction: a longitudinal MRI study in children. Brain Structure and Function, 2019, 224, 1519-1536.	1.2	25
31	Abnormal Microstructural Development of the Cerebral Cortex in Neonates With Congenital Heart Disease Is Associated With Impaired Cerebral Oxygen Delivery. Journal of the American Heart Association, 2019, 8, e009893.	1.6	48
32	Fixel-based analysis of the preterm brain: Disentangling bundle-specific white matter microstructural and macrostructural changes in relation to clinical risk factors. NeuroImage: Clinical, 2019, 23, 101820.	1.4	27
33	Relevance of timeâ€dependence for clinically viable diffusion imaging of the spinal cord. Magnetic Resonance in Medicine, 2019, 81, 1247-1264.	1.9	29
34	Neurite density is reduced in the presymptomatic phase ofC9orf72disease. Journal of Neurology, Neurosurgery and Psychiatry, 2019, 90, 387-394.	0.9	50
35	Neurite orientation and dispersion density imaging (NODDI) detects cortical and corticospinal tract degeneration in ALS. Journal of Neurology, Neurosurgery and Psychiatry, 2019, 90, 404-411.	0.9	70
36	A generative model of realistic brain cells with application to numerical simulation of the diffusion-weighted MR signal. NeuroImage, 2019, 188, 391-402.	2.1	36

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37	Imaging brain microstructure with diffusion MRI: practicality and applications. NMR in Biomedicine, 2019, 32, e3841.	1.6	266
38	Cortical microstructure in young onset Alzheimer's disease using neurite orientation dispersion and density imaging. Human Brain Mapping, 2018, 39, 3005-3017.	1.9	87
39	Neurite imaging reveals microstructural variations in human cerebral cortical gray matter. NeuroImage, 2018, 182, 488-499.	2.1	164
40	Susceptibility-induced distortion that varies due to motion: Correction in diffusion MR without acquiring additional data. NeuroImage, 2018, 171, 277-295.	2.1	92
41	Image processing and Quality Control for the first 10,000 brain imaging datasets from UK Biobank. NeuroImage, 2018, 166, 400-424.	2.1	1,026
42	Whole brain g-ratio mapping using myelin water imaging (MWI) and neurite orientation dispersion and density imaging (NODDI). NeuroImage, 2018, 182, 379-388.	2.1	35
43	Recent advances in diffusion neuroimaging: applications in the developing preterm brain. F1000Research, 2018, 7, 1326.	0.8	45
44	Prediction of Isocitrate Dehydrogenase Genotype in Brain Gliomas with MRI: Single-Shell versus Multishell Diffusion Models. Radiology, 2018, 289, 788-796.	3.6	31
45	In vivo characterization of white matter pathology in premanifest huntington's disease. Annals of Neurology, 2018, 84, 497-504.	2.8	53
46	A supervised learning approach for diffusion MRI quality control with minimal training data. NeuroImage, 2018, 178, 668-676.	2.1	30
47	Early development of structural networks and the impact of prematurity on brain connectivity. NeuroImage, 2017, 149, 379-392.	2.1	187
48	Image quality transfer and applications in diffusion MRI. NeuroImage, 2017, 152, 283-298.	2.1	91
49	ApoE influences regional white-matter axonal density loss in Alzheimer's disease. Neurobiology of Aging, 2017, 57, 8-17.	1.5	82
50	Towards a comprehensive framework for movement and distortion correction of diffusion MR images: Within volume movement. NeuroImage, 2017, 152, 450-466.	2.1	278
51	Neurite dispersion: a new marker of multiple sclerosis spinal cord pathology?. Annals of Clinical and Translational Neurology, 2017, 4, 663-679.	1.7	238
52	A tract-specific approach to assessing white matter in preterm infants. NeuroImage, 2017, 157, 675-694.	2.1	35
53	Impaired development of the cerebral cortex in infants with congenital heart disease is correlated to reduced cerebral oxygen delivery. Scientific Reports, 2017, 7, 15088.	1.6	60
54	Improved tractography using asymmetric fibre orientation distributions. NeuroImage, 2017, 158, 205-218.	2.1	39

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55	Study protocol: Insight 46 â€“ a neuroscience sub-study of the MRC National Survey of Health and Development. BMC Neurology, 2017, 17, 75.	0.8	64
56	Quantitative assessment of the susceptibility artefact and its interaction with motion in diffusion MRI. PLoS ONE, 2017, 12, e0185647.	1.1	72
57	Maturation Along White Matter Tracts in Human Brain Using a Diffusion Tensor Surface Model Tract-Specific Analysis. Frontiers in Neuroanatomy, 2016, 10, 9.	0.9	37
58	Assessing Microstructural Substrates of White Matter Abnormalities: A Comparative Study Using DTI and NODDI. PLoS ONE, 2016, 11, e0167884.	1.1	65
59	Crossing Versus Fanning: Model Comparison Using HCP Data. Mathematics and Visualization, 2016, , 159-169.	0.4	2
60	Age-dependent differences in brain tissue microstructure assessed with neurite orientation dispersion and density imaging. Neurobiology of Aging, 2016, 43, 79-88.	1.5	61
61	A framework for optimal whole-sample histological quantification of neurite orientation dispersion in the human spinal cord. Journal of Neuroscience Methods, 2016, 273, 20-32.	1.3	27
62	Binghamâ€“NODDI: Mapping anisotropic orientation dispersion of neurites using diffusion MRI. NeuroImage, 2016, 133, 207-223.	2.1	143
63	<scp>PGSE</scp>, <scp>OGSE</scp>, and sensitivity to axon diameter in diffusion <scp>MRI</scp>: Insight from a simulation study. Magnetic Resonance in Medicine, 2016, 75, 688-700.	1.9	109
64	Realistic simulation of artefacts in diffusion MRI for validating post-processing correction techniques. NeuroImage, 2016, 125, 1079-1094.	2.1	94
65	Application of neurite orientation dispersion and density imaging (NODDI) to a tau pathology model of Alzheimer's disease. NeuroImage, 2016, 125, 739-744.	2.1	179
66	Longitudinal diffusion tensor imaging in frontotemporal dementia. Annals of Neurology, 2015, 77, 33-46.	2.8	82
67	Longitudinal Diffusion Tensor Imaging Shows Progressive Changes in White Matter in Huntingtonâ€™s Disease. Journal of Huntington's Disease, 2015, 4, 333-346.	0.9	31
68	Neuropsychiatry and White Matter Microstructure in Huntingtonâ€™s Disease. Journal of Huntington's Disease, 2015, 4, 239-249.	0.9	33
69	Age-related microstructural differences quantified using myelin water imaging and advanced diffusion MRI. Neurobiology of Aging, 2015, 36, 2107-2121.	1.5	183
70	Neurite orientation dispersion and density imaging of the healthy cervical spinal cord in vivo. NeuroImage, 2015, 111, 590-601.	2.1	106
71	Plasticity of the human visual system after retinal gene therapy in patients with Leberâ€™s congenital amaurosis. Science Translational Medicine, 2015, 7, 296ra110.	5.8	51
72	White matter microstructure pathology in classic galactosemia revealed by neurite orientation dispersion and density imaging. Journal of Inherited Metabolic Disease, 2015, 38, 295-304.	1.7	58

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73	White matter compartment models for in vivo diffusion MRI at 300 mT/m. NeuroImage, 2015, 118, 468-483.	2.1	53
74	Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data. NeuroImage, 2015, 105, 32-44.	2.1	377
75	A Simulation Framework for Quantitative Validation of Artefact Correction in Diffusion MRI. Lecture Notes in Computer Science, 2015, 24, 638-649.	1.0	2
76	White Matter Disease Contributes to Apathy and Disinhibition in Behavioral Variant Frontotemporal Dementia. Cognitive and Behavioral Neurology, 2014, 27, 206-214.	0.5	33
77	Characterizing the microstructural basis of â€œunidentified bright objectsâ€•in neurofibromatosis type 1: A combined in vivo multicomponent T2 relaxation and multi-shell diffusion MRI analysis. NeuroImage: Clinical, 2014, 4, 649-658.	1.4	92
78	In vivo Estimation of Dispersion Anisotropy of Neurites Using Diffusion MRI. Lecture Notes in Computer Science, 2014, 17, 241-248.	1.0	6
79	Assessing white matter microstructure of the newborn with multi-shell diffusion MRI and biophysical compartment models. NeuroImage, 2014, 96, 288-299.	2.1	161
80	Advanced diffusion imaging sequences could aid assessing patients with focal cortical dysplasia and epilepsy. Epilepsy Research, 2014, 108, 336-339.	0.8	129
81	A ranking of diffusion MRI compartment models with in vivo human brain data. Magnetic Resonance in Medicine, 2014, 72, 1785-1792.	1.9	73
82	Model-Based Super-Resolution of Diffusion MRI. Mathematics and Visualization, 2014, , 25-34.	0.4	6
83	Image Quality Transfer via Random Forest Regression: Applications in Diffusion MRI. Lecture Notes in Computer Science, 2014, 17, 225-232.	1.0	67
84	Neonatal Encephalopathic Cerebral Injury in South India Assessed by Perinatal Magnetic Resonance Biomarkers and Early Childhood Neurodevelopmental Outcome. PLoS ONE, 2014, 9, e87874.	1.1	26
85	Effects of DTI spatial normalization on white matter tract reconstructions. , 2013, 8669, .		3
86	The CONNECT project: Combining macro- and micro-structure. NeuroImage, 2013, 80, 273-282.	2.1	121
87	An unbiased longitudinal analysis framework for tracking white matter changes using diffusion tensor imaging with application to Alzheimer's disease. NeuroImage, 2013, 72, 153-163.	2.1	111
88	Gaussian phase distribution approximations for oscillating gradient spin echo diffusion MRI. Journal of Magnetic Resonance, 2013, 227, 25-34.	1.2	48
89	White Matter Disease Correlates with Lexical Retrieval Deficits in Primary Progressive Aphasia. Frontiers in Neurology, 2013, 4, 212.	1.1	29
90	Magnetic resonance imaging evidence for presymptomatic change in thalamus and caudate in familial Alzheimerâ€™s disease. Brain, 2013, 136, 1399-1414.	3.7	174

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91	Ranking diffusion-MRI models with in-vivo human brain data. , 2013, , .		1
92	Multislice cardiac arterial spin labeling using improved myocardial perfusion quantification with simultaneously measured blood pool input function. Magnetic Resonance in Medicine, 2013, 70, 1125-1136.	1.9	16
93	The Importance of Being Dispersed: A Ranking of Diffusion MRI Models for Fibre Dispersion Using In Vivo Human Brain Data. Lecture Notes in Computer Science, 2013, 16, 74-81.	1.0	13
94	Registration of Prone and Supine CT Colonography Datasets with Differing Endoluminal Distension. Lecture Notes in Computer Science, 2013, , 29-38.	1.0	0
95	A diffusion tensor brain template for Rhesus Macaques. NeuroImage, 2012, 59, 306-318.	2.1	66
96	NODDI: Practical in vivo neurite orientation dispersion and density imaging of the human brain. NeuroImage, 2012, 61, 1000-1016.	2.1	2,398
97	The Importance of Group-Wise Registration in Tract Based Spatial Statistics Study of Neurodegeneration: A Simulation Study in Alzheimer's Disease. PLoS ONE, 2012, 7, e45996.	1.1	81
98	DTI registration in atlas based fiber analysis of infantile Krabbe disease. NeuroImage, 2011, 55, 1577-1586.	2.1	110
99	Axon diameter mapping in the presence of orientation dispersion with diffusion MRI. NeuroImage, 2011, 56, 1301-1315.	2.1	240
100	The matrix formalism for generalised gradients with time-varying orientation in diffusion NMR. Journal of Magnetic Resonance, 2011, 210, 151-157.	1.2	47
101	Axon Diameter Mapping in Crossing Fibers with Diffusion MRI. Lecture Notes in Computer Science, 2011, 14, 82-89.	1.0	16
102	A tract-specific framework for white matter morphometry combining macroscopic and microscopic tract features. Medical Image Analysis, 2010, 14, 666-673.	7.0	52
103	A Computational White Matter Atlas for Aging with Surface-Based Representation of Fasciculi. Lecture Notes in Computer Science, 2010, , 83-90.	1.0	17
104	High-Fidelity Meshes from Tissue Samples for Diffusion MRI Simulations. Lecture Notes in Computer Science, 2010, 13, 404-411.	1.0	24
105	Axon Diameter Mapping in the Presence of Orientation Dispersion with Diffusion MRI. Lecture Notes in Computer Science, 2010, 13, 640-647.	1.0	3
106	A Tract-Specific Framework for White Matter Morphometry Combining Macroscopic and Microscopic Tract Features. Lecture Notes in Computer Science, 2009, 12, 141-149.	1.0	8
107	Tensor-Based Morphometry of Fibrous Structures with Application to Human Brain White Matter. Lecture Notes in Computer Science, 2009, 12, 466-473.	1.0	2
108	Structure-Specific Statistical Mapping of White Matter Tracts. Mathematics and Visualization, 2009, , 83-112.	0.4	4

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109	Atypical cortical connectivity and visuospatial cognitive impairments are related in children with chromosome 22q11.2 deletion syndrome. Behavioral and Brain Functions, 2008, 4, 25.	1.4	51
110	Structure-specific statistical mapping of white matter tracts. NeuroImage, 2008, 41, 448-461.	2.1	158
111	Multivariate Analysis of Structural and Diffusion Imaging in Traumatic Brain Injury. Academic Radiology, 2008, 15, 1360-1375.	1.3	95
112	Multivariate analysis of thalamo-cortical connectivity loss in TBI. , 2008, , .		1
113	Atlas-guided probabilistic diffusion-tensor fiber tractography. , 2008, , .		5
114	Multivariate segmentation of brain tissues by fusion of MRI and DTI data. , 2008, , .		7
115	Surface-based modeling of white matter fasciculi with orientation encoding. , 2008, , .		1
116	High-Dimensional Spatial Normalization of Diffusion Tensor Images Improves the Detection of White Matter Differences: An Example Study Using Amyotrophic Lateral Sclerosis. IEEE Transactions on Medical Imaging, 2007, 26, 1585-1597.	5.4	250
117	Structure-Specific Statistical Mapping of White Matter Tracts using the Continuous Medial Representation. , 2007, , .		24
118	Hippocampus-specific fMRI group activation analysis using the continuous medial representation. NeuroImage, 2007, 35, 1516-1530.	2.1	28
119	Shape-Based Normalization of the Corpus Callosum for DTI Connectivity Analysis. IEEE Transactions on Medical Imaging, 2007, 26, 1166-1178.	5.4	18
120	Unbiased White Matter Atlas Construction Using Diffusion Tensor Images. , 2007, 10, 211-218.		66
121	A Fuzzy, Nonparametric Segmentation Framework for DTI and MRI Analysis: With Applications to DTI-Tract Extraction. IEEE Transactions on Medical Imaging, 2007, 26, 1525-1536.	5.4	53
122	Evaluation of Shape-Based Normalization in the Corpus Callosum for White Matter Connectivity Analysis. , 2007, 10, 777-784.		0
123	Continuous Medial Representation for Anatomical Structures. IEEE Transactions on Medical Imaging, 2006, 25, 1547-1564.	5.4	119
124	Deformable registration of diffusion tensor MR images with explicit orientation optimization. Medical Image Analysis, 2006, 10, 764-785.	7.0	453
125	Hippocampus-Specific fMRI Group Activation Analysis with Continuous M-Reps. Lecture Notes in Computer Science, 2006, 9, 284-291.	1.0	1
126	Parametric Medial Shape Representation in 3-D via the Poisson Partial Differential Equation with Non-linear Boundary Conditions. Lecture Notes in Computer Science, 2005, 19, 162-173.	1.0	7

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127	Statistical Modeling of Shape and Appearance Using the Continuous Medial Representation. Lecture Notes in Computer Science, 2005, 8, 725-732.	1.0	6
128	Efficient Generation of Shape-Based Reference Frames for the Corpus Callosum for DTI-based Connectivity Analysis. , 0, , .		0