

Karla L Miller

List of Publications by Year in descending order

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121
papers

25,915
citations

31976

53
h-index

18647

119
g-index

151
all docs

151
docs citations

151
times ranked

23060
citing authors

#	ARTICLE	IF	CITATIONS
1	Correspondence of the brain's functional architecture during activation and rest. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 13040-13045.	7.1	4,636
2	Network modelling methods for FMRI. NeuroImage, 2011, 54, 875-891.	4.2	1,588
3	Multimodal population brain imaging in the UK Biobank prospective epidemiological study. Nature Neuroscience, 2016, 19, 1523-1536.	14.8	1,414
4	Resting-state fMRI in the Human Connectome Project. NeuroImage, 2013, 80, 144-168.	4.2	1,367
5	Multiplexed Echo Planar Imaging for Sub-Second Whole Brain FMRI and Fast Diffusion Imaging. PLoS ONE, 2010, 5, e15710.	2.5	1,164
6	ICA-based artefact removal and accelerated fMRI acquisition for improved resting state network imaging. NeuroImage, 2014, 95, 232-247.	4.2	1,148
7	Image processing and Quality Control for the first 10,000 brain imaging datasets from UK Biobank. NeuroImage, 2018, 166, 400-424.	4.2	1,026
8	SARS-CoV-2 is associated with changes in brain structure in UK Biobank. Nature, 2022, 604, 697-707.	27.8	825
9	Functional connectomics from resting-state fMRI. Trends in Cognitive Sciences, 2013, 17, 666-682.	7.8	802
10	A positive-negative mode of population covariation links brain connectivity, demographics and behavior. Nature Neuroscience, 2015, 18, 1565-1567.	14.8	782
11	Pushing spatial and temporal resolution for functional and diffusion MRI in the Human Connectome Project. NeuroImage, 2013, 80, 80-104.	4.2	769
12	Temporally-independent functional modes of spontaneous brain activity. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3131-3136.	7.1	696
13	Genome-wide association studies of brain imaging phenotypes in UK Biobank. Nature, 2018, 562, 210-216.	27.8	551
14	Acquisition and voxelwise analysis of multi-subject diffusion data with Tract-Based Spatial Statistics. Nature Protocols, 2007, 2, 499-503.	12.0	526
15	Diffusion-Weighted Imaging Tractography-Based Parcellation of the Human Parietal Cortex and Comparison with Human and Macaque Resting-State Functional Connectivity. Journal of Neuroscience, 2011, 31, 4087-4100.	3.6	446
16	Social Network Size Affects Neural Circuits in Macaques. Science, 2011, 334, 697-700.	12.6	435
17	Medium-term effects of SARS-CoV-2 infection on multiple vital organs, exercise capacity, cognition, quality of life and mental health, post-hospital discharge. EClinicalMedicine, 2021, 31, 100683.	7.1	435
18	Motor Skill Learning Induces Changes in White Matter Microstructure and Myelination. Journal of Neuroscience, 2013, 33, 19499-19503.	3.6	369

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19	The UK Biobank imaging enhancement of 100,000 participants: rationale, data collection, management and future directions. <i>Nature Communications</i> , 2020, 11, 2624.	12.8	324
20	Estimation of brain age delta from brain imaging. <i>NeuroImage</i> , 2019, 200, 528-539.	4.2	274
21	Diffusion imaging of whole, post-mortem human brains on a clinical MRI scanner. <i>NeuroImage</i> , 2011, 57, 167-181.	4.2	239
22	Discrepancies between BOLD and flow dynamics in primary and supplementary motor areas: application of the balloon model to the interpretation of BOLD transients. <i>NeuroImage</i> , 2004, 21, 144-153.	4.2	226
23	Studying neuroanatomy using MRI. <i>Nature Neuroscience</i> , 2017, 20, 314-326.	14.8	220
24	Group-PCA for very large fMRI datasets. <i>NeuroImage</i> , 2014, 101, 738-749.	4.2	218
25	Physiological noise modelling for spinal functional magnetic resonance imaging studies. <i>NeuroImage</i> , 2008, 39, 680-692.	4.2	212
26	Causal effect of disconnection lesions on interhemispheric functional connectivity in rhesus monkeys. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 13982-13987.	7.1	195
27	Nonlinear temporal dynamics of the cerebral blood flow response. <i>Human Brain Mapping</i> , 2001, 13, 1-12.	3.6	183
28	Nonlinear phase correction for navigated diffusion imaging. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 343-353.	3.0	166
29	High resolution diffusion-weighted imaging in fixed human brain using diffusion-weighted steady state free precession. <i>NeuroImage</i> , 2009, 46, 775-785.	4.2	166
30	Spectral characteristics of resting state networks. <i>Progress in Brain Research</i> , 2011, 193, 259-276.	1.4	164
31	MRI characteristics of the substantia nigra in Parkinson's disease: A combined quantitative T1 and DTI study. <i>NeuroImage</i> , 2009, 47, 435-441.	4.2	163
32	Evaluating fibre orientation dispersion in white matter: Comparison of diffusion MRI, histology and polarized light imaging. <i>NeuroImage</i> , 2017, 157, 561-574.	4.2	141
33	Microstructural imaging of the human brain with a "super-scanner": 10 key advantages of ultra-strong gradients for diffusion MRI. <i>NeuroImage</i> , 2018, 182, 8-38.	4.2	138
34	Confound modelling in UK Biobank brain imaging. <i>NeuroImage</i> , 2021, 224, 117002.	4.2	135
35	A Neural Circuit Covarying with Social Hierarchy in Macaques. <i>PLoS Biology</i> , 2014, 12, e1001940.	5.6	133
36	A combined post-mortem magnetic resonance imaging and quantitative histological study of multiple sclerosis pathology. <i>Brain</i> , 2012, 135, 2938-2951.	7.6	131

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37	Connectivity-based segmentation of the substantia nigra in human and its implications in Parkinson's disease. <i>NeuroImage</i> , 2010, 52, 1175-1180.	4.2	124
38	Brain aging comprises many modes of structural and functional change with distinct genetic and biophysical associations. <i>ELife</i> , 2020, 9, .	6.0	122
39	Steady-state diffusion-weighted imaging of in vivo knee cartilage. <i>Magnetic Resonance in Medicine</i> , 2004, 51, 394-398.	3.0	117
40	DANTE-prepared pulse trains: A novel approach to motion-sensitized and motion-suppressed quantitative magnetic resonance imaging. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 1423-1438.	3.0	116
41	<i>Ex vivo</i> diffusion MRI of the human brain: Technical challenges and recent advances. <i>NMR in Biomedicine</i> , 2019, 32, e3941.	2.8	106
42	Image formation in diffusion MRI: A review of recent technical developments. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 46, 646-662.	3.4	97
43	The extreme capsule fiber complex in humans and macaque monkeys: a comparative diffusion MRI tractography study. <i>Brain Structure and Function</i> , 2016, 221, 4059-4071.	2.3	91
44	Measuring the Effects of Remifentanyl on Cerebral Blood Flow and Arterial Arrival Time Using 3D Grase MRI with Pulsed Arterial Spin Labelling. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2008, 28, 1514-1522.	4.3	89
45	Addressing a systematic vibration artifact in diffusion-weighted MRI. <i>Human Brain Mapping</i> , 2010, 31, 193-202.	3.6	85
46	Cerebral Blood Flow, Blood Volume, and Oxygen Metabolism Dynamics in Human Visual and Motor Cortex as Measured by Whole-Brain Multi-Modal Magnetic Resonance Imaging. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2009, 29, 1856-1866.	4.3	84
47	Study protocol: the Whitehall II imaging sub-study. <i>BMC Psychiatry</i> , 2014, 14, 159.	2.6	82
48	Evidence for a vascular contribution to diffusion FMRI at high b value. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 20967-20972.	7.1	81
49	Functional brain imaging using a blood oxygenation sensitive steady state. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 675-683.	3.0	78
50	Detecting microstructural properties of white matter based on compartmentalization of magnetic susceptibility. <i>NeuroImage</i> , 2013, 70, 1-9.	4.2	76
51	Diffusion tractography of post-mortem human brains: Optimization and comparison of spin echo and steady-state free precession techniques. <i>NeuroImage</i> , 2012, 59, 2284-2297.	4.2	70
52	Scan time reduction for readout-segmented EPI using simultaneous multislice acceleration: Diffusion-weighted imaging at 3 and 7 Tesla. <i>Magnetic Resonance in Medicine</i> , 2015, 74, 136-149.	3.0	70
53	High-resolution FMRI at 1.5T using balanced SSFP. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 161-170.	3.0	66
54	Meaningful design and contrast estimability in FMRI. <i>NeuroImage</i> , 2007, 34, 127-136.	4.2	60

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55	FASTER: Acceleration of functional MRI data acquisition using low rank constraints. <i>Magnetic Resonance in Medicine</i> , 2015, 74, 353-364.	3.0	58
56	The spatial correspondence and genetic influence of interhemispheric connectivity with white matter microstructure. <i>Nature Neuroscience</i> , 2019, 22, 809-819.	14.8	56
57	High-resolution diffusion MRI at 7T using a three-dimensional multi-slab acquisition. <i>NeuroImage</i> , 2016, 143, 1-14.	4.2	55
58	The danger of systematic bias in group-level fMRI-lag-based causality estimation. <i>NeuroImage</i> , 2012, 59, 1228-1229.	4.2	54
59	Reducing distortions in diffusion-weighted echo planar imaging with a dual-echo blip-reversed sequence. <i>Magnetic Resonance in Medicine</i> , 2010, 64, 382-390.	3.0	49
60	Primate comparative neuroscience using magnetic resonance imaging: promises and challenges. <i>Frontiers in Neuroscience</i> , 2014, 8, 298.	2.8	49
61	Longitudinal connections and the organization of the temporal cortex in macaques, great apes, and humans. <i>PLoS Biology</i> , 2020, 18, e3000810.	5.6	49
62	Dissecting the pathobiology of altered MRI signal in amyotrophic lateral sclerosis: A post mortem whole brain sampling strategy for the integration of ultra-high-field MRI and quantitative neuropathology. <i>BMC Neuroscience</i> , 2018, 19, 11.	1.9	47
63	The effect of realistic geometries on the susceptibility-weighted MR signal in white matter. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 489-500.	3.0	45
64	Modeling SSFP functional MRI contrast in the brain. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 661-673.	3.0	44
65	Dentatorubrothalamic tract localization with postmortem MR diffusion tractography compared to histological 3D reconstruction. <i>Brain Structure and Function</i> , 2016, 221, 3487-3501.	2.3	43
66	Signal and noise characteristics of SSFP fMRI: A comparison with GRE at multiple field strengths. <i>NeuroImage</i> , 2007, 37, 1227-1236.	4.2	42
67	Improving diffusion-weighted imaging of post-mortem human brains: SSFP at 7T. <i>NeuroImage</i> , 2014, 102, 579-589.	4.2	42
68	fMRI using balanced steady-state free precession (SSFP). <i>NeuroImage</i> , 2012, 62, 713-719.	4.2	41
69	Pathology of callosal damage in ALS: An ex-vivo, 7 T diffusion tensor MRI study. <i>NeuroImage: Clinical</i> , 2017, 15, 200-208.	2.7	40
70	Sensitivity of diffusion weighted steady state free precession to anisotropic diffusion. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 405-413.	3.0	39
71	Steady-state diffusion-weighted imaging: theory, acquisition and analysis. <i>NMR in Biomedicine</i> , 2010, 23, 781-793.	2.8	39
72	Respiration-induced B0 field fluctuation compensation in balanced SSFP: Real-time approach for transition-band SSFP fMRI. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 1197-1201.	3.0	38

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73	3D Multi-slab diffusion-weighted readout-segmented EPI with real-time cardiac-reordered k-space acquisition. <i>Magnetic Resonance in Medicine</i> , 2014, 72, 1565-1579.	3.0	38
74	Methods for quantitative susceptibility and R2* mapping in whole post-mortem brains at 7T applied to amyotrophic lateral sclerosis. <i>NeuroImage</i> , 2020, 222, 117216.	4.2	37
75	Diffusion tensor imaging of dolphin brains reveals direct auditory pathway to temporal lobe. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2015, 282, 20151203.	2.6	36
76	3D steady-state diffusion-weighted imaging with trajectory using radially batched internal navigator echoes (TURBINE). <i>Magnetic Resonance in Medicine</i> , 2010, 63, 235-242.	3.0	34
77	Implementation and assessment of diffusion-weighted partial Fourier readout-segmented echo-planar imaging. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 441-451.	3.0	33
78	Asymmetries of the balanced SSFP profile. Part I: Theory and observation. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 385-395.	3.0	32
79	Reducing slab boundary artifacts in three-dimensional multislabs diffusion MRI using nonlinear inversion for slab profile encoding (NPEN). <i>Magnetic Resonance in Medicine</i> , 2016, 76, 1183-1195.	3.0	32
80	Optimization of 4D vessel-selective arterial spin labeling angiography using balanced steady-state free precession and vessel-encoding. <i>NMR in Biomedicine</i> , 2016, 29, 776-786.	2.8	31
81	Spatiotemporal characterization of breathing-induced B0 field fluctuations in the cervical spinal cord at 7T. <i>NeuroImage</i> , 2018, 167, 191-202.	4.2	31
82	Cortical and subcortical connections within the pedunculo-pontine nucleus of the primate <i>Macaca mulatta</i> determined using probabilistic diffusion tractography. <i>Journal of Clinical Neuroscience</i> , 2009, 16, 413-420.	1.5	30
83	White matter structure and myelin-related gene expression alterations with experience in adult rats. <i>Progress in Neurobiology</i> , 2020, 187, 101770.	5.7	30
84	Accelerating functional MRI using fixed-rank approximations and radial-Cartesian sampling. <i>Magnetic Resonance in Medicine</i> , 2016, 76, 1825-1836.	3.0	29
85	Motion correction for functional MRI with three-dimensional hybrid radial-Cartesian EPI. <i>Magnetic Resonance in Medicine</i> , 2017, 78, 527-540.	3.0	28
86	Associations between moderate alcohol consumption, brain iron, and cognition in UK Biobank participants: Observational and mendelian randomization analyses. <i>PLoS Medicine</i> , 2022, 19, e1004039.	8.4	28
87	Asymmetries of the balanced SSFP profile. Part II: White matter. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 396-406.	3.0	27
88	TREMR: T1-resonance elastography with MR. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 815-821.	3.0	26
89	Reduced limbic connections may contraindicate subgenual cingulate deep brain stimulation for intractable depression. <i>Journal of Neurosurgery</i> , 2009, 111, 780-784.	1.6	23
90	White matter changes in the perforant path area in patients with amyotrophic lateral sclerosis. <i>Neuropathology and Applied Neurobiology</i> , 2019, 45, 570-585.	3.2	22

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91	The Digital Brain Bank, an open access platform for post-mortem imaging datasets. <i>ELife</i> , 2022, 11, .	6.0	22
92	Relating diffusion tensor imaging measurements to microstructural quantities in the cerebral cortex in multiple sclerosis. <i>Human Brain Mapping</i> , 2019, 40, 4417-4431.	3.6	21
93	Phenotypic and genetic associations of quantitative magnetic susceptibility in UK Biobank brain imaging. <i>Nature Neuroscience</i> , 2022, 25, 818-831.	14.8	21
94	Social connections predict brain structure in a multidimensional free-ranging primate society. <i>Science Advances</i> , 2022, 8, eabl5794.	10.3	20
95	Joint modelling of diffusion MRI and microscopy. <i>NeuroImage</i> , 2019, 201, 116014.	4.2	19
96	Diffusion Acceleration with Gaussian process Estimated Reconstruction (DAGER). <i>Magnetic Resonance in Medicine</i> , 2019, 82, 107-125.	3.0	19
97	Preserved extrastriate visual network in a monkey with substantial, naturally occurring damage to primary visual cortex. <i>ELife</i> , 2019, 8, .	6.0	19
98	A method for correcting breathing-induced field fluctuations in T2*-weighted spinal cord imaging using a respiratory trace. <i>Magnetic Resonance in Medicine</i> , 2019, 81, 3745-3753.	3.0	18
99	Steady-state MRI: methods for neuroimaging. <i>Imaging in Medicine</i> , 2011, 3, 93-105.	0.0	17
100	Adapting the UK Biobank Brain Imaging Protocol and Analysis Pipeline for the C-MORE Multi-Organ Study of COVID-19 Survivors. <i>Frontiers in Neurology</i> , 2021, 12, 753284.	2.4	16
101	Optimizing RetrolCor and RetroKCor corrections for multi-shot 3D fMRI acquisitions. <i>NeuroImage</i> , 2014, 84, 394-405.	4.2	15
102	A model for extra-axonal diffusion spectra with frequency-dependent restriction. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 2306-2320.	3.0	15
103	Recovering task fMRI signals from highly under-sampled data with low-rank and temporal subspace constraints. <i>NeuroImage</i> , 2018, 174, 97-110.	4.2	15
104	Real-time cardiac synchronization with fixed volume frame rate for reducing physiological instabilities in 3D fMRI. <i>NeuroImage</i> , 2011, 57, 1364-1375.	4.2	14
105	Diffusion MRI data, sulcal anatomy, and tractography for eight species from the Primate Brain Bank. <i>Brain Structure and Function</i> , 2021, 226, 2497-2509.	2.3	12
106	PEAR: PEriodic And fixed Rank separation for fast fMRI. <i>Medical Physics</i> , 2017, 44, 6166-6182.	3.0	11
107	Modeling an equivalent b-value in diffusion-weighted steady-state free precession. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 873-884.	3.0	11
108	A 3D k-space Fourier encoding and reconstruction framework for simultaneous multi-slab acquisition. <i>Magnetic Resonance in Medicine</i> , 2019, 82, 1012-1024.	3.0	7

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109	Use of multi-flip angle measurements to account for transmit inhomogeneity and non-Gaussian diffusion in DW-SSFP. <i>NeuroImage</i> , 2020, 220, 117113.	4.2	7
110	Template-based field map prediction for rapid whole brain B ₀ shimming. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 171-180.	3.0	5
111	Improved statistical efficiency of simultaneous multi-slice fMRI by reconstruction with spatially adaptive temporal smoothing. <i>NeuroImage</i> , 2019, 203, 116165.	4.2	5
112	Subspace-constrained approaches to low-rank fMRI acceleration. <i>NeuroImage</i> , 2021, 238, 118235.	4.2	5
113	Ultrahigh Resolution fMRI at 7T Using Radial-Cartesian TURBINE Sampling. <i>Magnetic Resonance in Medicine</i> , 2022, 88, 2058-2073.	3.0	5
114	A method to remove the influence of fixative concentration on postmortem T ₂ maps using a kinetic tensor model. <i>Human Brain Mapping</i> , 2021, 42, 5956-5972.	3.6	4
115	Model-based dynamic off-resonance correction for improved accelerated fMRI in awake behaving nonhuman primates. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 2922-2932.	3.0	4
116	Choice of reference measurements affects quantification of long diffusion time behaviour using stimulated echoes. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 952-959.	3.0	3
117	Resonate: Reaching Excellence Through Equity, Diversity, and Inclusion in ISMRM. <i>Journal of Magnetic Resonance Imaging</i> , 2021, 53, 1608-1611.	3.4	3
118	Diffusion Acquisition. , 2014, , 35-61.		2
119	Quantifying myelin in crossing fibers using diffusion-prepared phase imaging: Theory and simulations. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2618-2634.	3.0	2
120	Resonate: Reflections and recommendations on implicit biases within the ISMRM. <i>Journal of Magnetic Resonance Imaging</i> , 2019, 49, 1509-1511.	3.4	1
121	Advanced MRI Methods. , 2015, , 85-91.		0