

Markus Barth

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

109
papers

4,273
citations

38
h-index

62
g-index

126
ext. papers

5,087
ext. citations

5.5
avg, IF

5.49
L-index

#	Paper	IF	Citations
109	Simultaneous multislice (SMS) imaging techniques. <i>Magnetic Resonance in Medicine</i> , 2016 , 75, 63-81	4.4	280
108	Three dimensional echo-planar imaging at 7 Tesla. <i>NeuroImage</i> , 2010 , 51, 261-6	7.9	197
107	Magnetic susceptibility-weighted MR phase imaging of the human brain. <i>American Journal of Neuroradiology</i> , 2005 , 26, 736-42	4.4	177
106	High-resolution MR venography at 3.0 Tesla. <i>Journal of Computer Assisted Tomography</i> , 2000 , 24, 949-57	2.2	173
105	Layer-specific BOLD activation in human V1. <i>Human Brain Mapping</i> , 2010 , 31, 1297-304	5.9	146
104	Noninvasive assessment of vascular architecture and function during modulated blood oxygenation using susceptibility weighted magnetic resonance imaging. <i>Magnetic Resonance in Medicine</i> , 2005 , 54, 87-95	4.4	118
103	Multi-echo fMRI of the cortical laminae in humans at 7 T. <i>NeuroImage</i> , 2011 , 56, 1276-85	7.9	117
102	Fast quantitative susceptibility mapping using 3D EPI and total generalized variation. <i>NeuroImage</i> , 2015 , 111, 622-30	7.9	112
101	Evaluation of preoperative high magnetic field motor functional MRI (3 Tesla) in glioma patients by navigated electrocortical stimulation and postoperative outcome. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2005 , 76, 1152-7	5.5	112
100	Power Independent of Number of Slices (PINS) radiofrequency pulses for low-power simultaneous multislice excitation. <i>Magnetic Resonance in Medicine</i> , 2011 , 66, 1234-40	4.4	99
99	MR venography of the human brain using susceptibility weighted imaging at very high field strength. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2008 , 21, 149-58	2.8	99
98	Memory stabilization with targeted reactivation during human slow-wave sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 10575-80	11.5	96
97	Magnetic resonance imaging contrast enhancement of brain tumors at 3 tesla versus 1.5 tesla. <i>Investigative Radiology</i> , 2002 , 37, 114-9	10.1	95
96	A cortical vascular model for examining the specificity of the laminar BOLD signal. <i>NeuroImage</i> , 2016 , 132, 491-498	7.9	90
95	Automated unwrapping of MR phase images applied to BOLD MR-venography at 3 Tesla. <i>Journal of Magnetic Resonance Imaging</i> , 2003 , 18, 175-80	5.6	89
94	Sleep supports selective retention of associative memories based on relevance for future utilization. <i>PLoS ONE</i> , 2012 , 7, e43426	3.7	79
93	Wavelet-based multifractal analysis of fMRI time series. <i>NeuroImage</i> , 2004 , 22, 1195-202	7.9	79

92	Phase unwrapping of MR images using Phi UN--a fast and robust region growing algorithm. <i>Medical Image Analysis</i> , 2009 , 13, 257-68	15.4	76
91	Linear reconstruction of perceived images from human brain activity. <i>NeuroImage</i> , 2013 , 83, 951-61	7.9	71
90	A quantitative comparison of functional MRI cluster analysis. <i>Artificial Intelligence in Medicine</i> , 2004 , 31, 57-71	7.4	68
89	7 tesla MRI of microbleeds and white matter lesions as seen in vascular dementia. <i>Journal of Magnetic Resonance Imaging</i> , 2011 , 33, 782-91	5.6	65
88	Contrast-to-noise ratio (CNR) as a quality parameter in fMRI. <i>Journal of Magnetic Resonance Imaging</i> , 2007 , 25, 1263-70	5.6	54
87	Whole brain, high resolution spin-echo resting state fMRI using PINS multiplexing at 7 T. <i>NeuroImage</i> , 2012 , 62, 1939-46	7.9	53
86	Influence of fMRI smoothing procedures on replicability of fine scale motor localization. <i>NeuroImage</i> , 2005 , 24, 323-31	7.9	50
85	Robust field map generation using a triple-echo acquisition. <i>Journal of Magnetic Resonance Imaging</i> , 2004 , 20, 730-4	5.6	50
84	DeepQSM - using deep learning to solve the dipole inversion for quantitative susceptibility mapping. <i>NeuroImage</i> , 2019 , 195, 373-383	7.9	48
83	T1 mapping of the entire lung parenchyma: Influence of respiratory phase and correlation to lung function test results in patients with diffuse lung disease. <i>Magnetic Resonance in Medicine</i> , 2008 , 59, 96-101	4.4	47
82	High-resolution three-dimensional contrast-enhanced blood oxygenation level-dependent magnetic resonance venography of brain tumors at 3 Tesla: first clinical experience and comparison with 1.5 Tesla. <i>Investigative Radiology</i> , 2003 , 38, 409-14	10.1	47
81	High-resolution, multiple gradient-echo functional MRI at 1.5 T. <i>Magnetic Resonance Imaging</i> , 1999 , 17, 321-9	3.3	47
80	MR contrast agent at high-field MRI (3 Tesla). <i>Topics in Magnetic Resonance Imaging</i> , 2003 , 14, 365-75	2.3	46
79	Improved sensitivity and specificity for resting state and task fMRI with multiband multi-echo EPI compared to multi-echo EPI at 7 T. <i>NeuroImage</i> , 2015 , 119, 352-61	7.9	43
78	T1 mapping of the entire lung parenchyma: Influence of the respiratory phase in healthy individuals. <i>Journal of Magnetic Resonance Imaging</i> , 2005 , 21, 759-64	5.6	42
77	Functional connectivity during light sleep is correlated with memory performance for face-location associations. <i>NeuroImage</i> , 2011 , 57, 262-270	7.9	41
76	Layer-specific diffusion weighted imaging in human primary visual cortex in vitro. <i>Cortex</i> , 2013 , 49, 2569-88	3.8	40
75	Echo time-dependent quantitative susceptibility mapping contains information on tissue properties. <i>Magnetic Resonance in Medicine</i> , 2017 , 77, 1946-1958	4.4	39

74	Diffusion tensor characteristics of gyrencephaly using high resolution diffusion MRI in vivo at 7T. <i>NeuroImage</i> , 2015 , 109, 378-87	7.9	39
73	Contrast-enhanced, high-resolution, susceptibility-weighted magnetic resonance imaging of the brain: dose-dependent optimization at 3 tesla and 1.5 tesla in healthy volunteers. <i>Investigative Radiology</i> , 2006 , 41, 249-55	10.1	39
72	Serial correlations in single-subject fMRI with sub-second TR. <i>NeuroImage</i> , 2018 , 166, 152-166	7.9	38
71	Whole brain, high resolution multiband spin-echo EPI fMRI at 7 T: a comparison with gradient-echo EPI using a color-word Stroop task. <i>NeuroImage</i> , 2014 , 97, 142-50	7.9	38
70	Combining phase images from array coils using a short echo time reference scan (COMPOSER). <i>Magnetic Resonance in Medicine</i> , 2017 , 77, 318-327	4.4	37
69	Scaling laws and persistence in human brain activity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003 , 326, 511-521	3.3	37
68	A method for the dynamic correction of B-related distortions in single-echo EPI at 7T. <i>NeuroImage</i> , 2018 , 168, 321-331	7.9	36
67	Application of PINS radiofrequency pulses to reduce power deposition in RARE/turbo spin echo imaging of the human head. <i>Magnetic Resonance in Medicine</i> , 2014 , 71, 44-9	4.4	36
66	Improved elimination of phase effects from background field inhomogeneities for susceptibility weighted imaging at high magnetic field strengths. <i>Magnetic Resonance Imaging</i> , 2008 , 26, 1145-51	3.3	35
65	T2-weighted 3D fMRI using S2-SSFP at 7 tesla. <i>Magnetic Resonance in Medicine</i> , 2010 , 63, 1015-20	4.4	34
64	Functional MRI of the human motor cortex using single-shot, multiple gradient-echo spiral imaging. <i>Magnetic Resonance Imaging</i> , 1999 , 17, 1239-43	3.3	33
63	Susceptibility weighted magnetic resonance imaging of cerebral cavernous malformations: prospects, drawbacks, and first experience at ultra-high field strength (7-Tesla) magnetic resonance imaging. <i>Neurosurgical Focus</i> , 2010 , 29, E5	4.2	32
62	Very high-resolution three-dimensional functional MRI of the human visual cortex with elimination of large venous vessels. <i>NMR in Biomedicine</i> , 2007 , 20, 477-84	4.4	32
61	Diffusion parameter mapping with the combined intravoxel incoherent motion and kurtosis model using artificial neural networks at 3T. <i>NMR in Biomedicine</i> , 2017 , 30, e3833	4.4	30
60	Fuzzy cluster analysis of high-field functional MRI data. <i>Artificial Intelligence in Medicine</i> , 2003 , 29, 203-237	3.4	30
59	Generalized INverse imaging (GIN): ultrafast fMRI with physiological noise correction. <i>Magnetic Resonance in Medicine</i> , 2013 , 70, 962-71	4.4	27
58	Electrophysiological correlation patterns of resting state networks in single subjects: a combined EEG-fMRI study. <i>Brain Topography</i> , 2013 , 26, 98-109	4.3	26
57	An Investigation of RSN Frequency Spectra Using Ultra-Fast Generalized Inverse Imaging. <i>Frontiers in Human Neuroscience</i> , 2013 , 7, 156	3.3	26

56	Measuring the effects of attention to individual fingertips in somatosensory cortex using ultra-high field (7T) fMRI. <i>NeuroImage</i> , 2017 , 161, 179-187	7.9	25
55	Reference-free unwarping of EPI data using dynamic off-resonance correction with multiecho acquisition (DOCM). <i>Magnetic Resonance in Medicine</i> , 2012 , 68, 1247-54	4.4	25
54	Explorative signal processing in functional MR imaging. <i>International Journal of Imaging Systems and Technology</i> , 1999 , 10, 166-176	2.5	22
53	BOLD fMRI signal characteristics of S1- and S2-SSFP at 7 Tesla. <i>Frontiers in Neuroscience</i> , 2014 , 8, 49	5.1	19
52	Bayesian population receptive field modeling in human somatosensory cortex. <i>NeuroImage</i> , 2020 , 208, 116465	7.9	19
51	Modulation of signal changes in gradient-recalled echo functional MRI with increasing echo time correlate with model calculations. <i>Magnetic Resonance Imaging</i> , 1997 , 15, 745-52	3.3	18
50	High-resolution three-dimensional contrast-enhanced blood oxygenation level-dependent magnetic resonance venography of brain tumors at 3 Tesla: First clinical experience and comparison with 1.5 Tesla. <i>Investigative Radiology</i> , 2003 , 38, 409-414	10.1	17
49	A time-efficient acquisition protocol for multipurpose diffusion-weighted microstructural imaging at 7 Tesla. <i>Magnetic Resonance in Medicine</i> , 2017 , 78, 2170-2184	4.4	16
48	Single-shot echo-planar imaging with Nyquist ghost compensation: interleaved dual echo with acceleration (IDEA) echo-planar imaging (EPI). <i>Magnetic Resonance in Medicine</i> , 2013 , 69, 37-47	4.4	16
47	A study-specific fMRI normalization approach that operates directly on high resolution functional EPI data at 7 Tesla. <i>NeuroImage</i> , 2014 , 100, 710-4	7.9	16
46	Advances in High-Field BOLD fMRI. <i>Materials</i> , 2011 , 4, 1941-1955	3.5	16
45	Correcting dynamic distortions in 7T echo planar imaging using a jittered echo time sequence. <i>Magnetic Resonance in Medicine</i> , 2016 , 76, 1388-1399	4.4	16
44	Structure Tensor Informed Fiber Tractography (STIFT) by combining gradient echo MRI and diffusion weighted imaging. <i>NeuroImage</i> , 2012 , 59, 3941-54	7.9	15
43	Comparison of fMRI coregistration results between human experts and software solutions in patients and healthy subjects. <i>European Radiology</i> , 2007 , 17, 1634-43	8	15
42	Using multi-echo simultaneous multi-slice (SMS) EPI to improve functional MRI of the subcortical nuclei of the basal ganglia at ultra-high field (7T). <i>NeuroImage</i> , 2018 , 172, 886-895	7.9	15
41	Assessment of microstructural signal compartments across the corpus callosum using multi-echo gradient recalled echo at 7T. <i>NeuroImage</i> , 2018 , 182, 407-416	7.9	15
40	The Quest for EEG Power Band Correlation with ICA Derived fMRI Resting State Networks. <i>Frontiers in Human Neuroscience</i> , 2013 , 7, 315	3.3	14
39	fMRI reveals functional cortex in a case of inconclusive Wada testing. <i>Clinical Neurology and Neurosurgery</i> , 2005 , 107, 147-51	2	14

38	Simultaneous multislice inversion contrast imaging using power independent of the number of slices (PINS) and delays alternating with nutation for tailored excitation (DANTE) radio frequency pulses. <i>Magnetic Resonance in Medicine</i> , 2013 , 69, 1670-6	4.4	13
37	Cued reactivation during slow-wave sleep induces brain connectivity changes related to memory stabilization. <i>Scientific Reports</i> , 2018 , 8, 16958	4.9	13
36	The challenge of bias-free coil combination for quantitative susceptibility mapping at ultra-high field. <i>Magnetic Resonance in Medicine</i> , 2018 , 79, 97-107	4.4	12
35	Adaptive SAR mass-averaging framework to improve predictions of local RF heating near a hip implant for parallel transmit at 7 T. <i>Magnetic Resonance in Medicine</i> , 2019 , 81, 615-627	4.4	11
34	Online decoding of object-based attention using real-time fMRI. <i>European Journal of Neuroscience</i> , 2014 , 39, 319-29	3.5	11
33	ECG Triggering in Ultra-High Field Cardiovascular MRI. <i>Tomography</i> , 2016 , 2, 167-174	3.1	11
32	Generic acquisition protocol for quantitative MRI of the spinal cord. <i>Nature Protocols</i> , 2021 , 16, 4611-4638	3.8	11
31	Robust SENSE reconstruction of simultaneous multislice EPI with low-rank enhanced coil sensitivity calibration and slice-dependent 2D Nyquist ghost correction. <i>Magnetic Resonance in Medicine</i> , 2018 , 80, 1376-1390	4.4	10
30	Quantification of signal changes in gradient recalled echo fMRI. <i>Magnetic Resonance Imaging</i> , 1997 , 15, 753-62	3.3	10
29	Contrast enhanced susceptibility weighted imaging (CE-SWI) of the mouse brain using ultrasmall superparamagnetic ironoxide particles (USPIO). <i>Zeitschrift Fur Medizinische Physik</i> , 2006 , 16, 269-74	7.6	10
28	Pulsed arterial spin labelling at ultra-high field with a B 1 (+) -optimised adiabatic labelling pulse. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2016 , 29, 463-73	2.8	10
27	SHARQnet - Sophisticated harmonic artifact reduction in quantitative susceptibility mapping using a deep convolutional neural network. <i>Zeitschrift Fur Medizinische Physik</i> , 2019 , 29, 139-149	7.6	9
26	A population-specific symmetric phase model to automatically analyze susceptibility-weighted imaging (SWI) phase shifts and phase symmetry in the human brain. <i>Journal of Magnetic Resonance Imaging</i> , 2010 , 31, 215-20	5.6	9
25	Filtered deconvolution of a simulated and an in vivo phase model of the human brain. <i>Journal of Magnetic Resonance Imaging</i> , 2010 , 32, 289-97	5.6	9
24	Characterization of BOLD activation in multi-echo fMRI data using fuzzy cluster analysis and a comparison with quantitative modeling. <i>NMR in Biomedicine</i> , 2001 , 14, 484-9	4.4	9
23	Comparison of multi-echo spiral and echo planar imaging in functional MRI. <i>Magnetic Resonance Imaging</i> , 2002 , 20, 359-64	3.3	8
22	7T GRE-MRI signal compartments are sensitive to dysplastic tissue in focal epilepsy. <i>Magnetic Resonance Imaging</i> , 2019 , 61, 1-8	3.3	7
21	New acquisition techniques and their prospects for the achievable resolution of fMRI. <i>Progress in Neurobiology</i> , 2020 , 207, 101936	10.9	7

20	Selective channel combination of MRI signal phase. <i>Magnetic Resonance in Medicine</i> , 2016 , 76, 1469-1477	4.4	7
19	PEC-GRAPPA reconstruction of simultaneous multislice EPI with slice-dependent 2D Nyquist ghost correction. <i>Magnetic Resonance in Medicine</i> , 2019 , 81, 1924-1934	4.4	7
18	Non-linear realignment improves hippocampus subfield segmentation reliability. <i>NeuroImage</i> , 2019 , 203, 116206	7.9	6
17	Cardiac Magnetic Resonance Imaging at 7 Tesla. <i>Journal of Visualized Experiments</i> , 2019 ,	1.6	6
16	Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers. <i>Scientific Data</i> , 2021 , 8, 219	8.2	6
15	Improved susceptibility weighted imaging at ultra-high field using bipolar multi-echo acquisition and optimized image processing: CLEAR-SWI. <i>NeuroImage</i> , 2021 , 237, 118175	7.9	6
14	A numerical and experimental study of RF shimming in the presence of hip prostheses using adaptive SAR at 3 T. <i>Magnetic Resonance in Medicine</i> , 2019 , 81, 3826-3839	4.4	4
13	Accelerated mapping of magnetic susceptibility using 3D planes-on-a-paddlewheel (POP) EPI at ultra-high field strength. <i>NMR in Biomedicine</i> , 2017 , 30, e3620	4.4	4
12	Patient with ALS with a novel TBK1 mutation, widespread brain involvement, behaviour changes and metabolic dysfunction. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2019 , 90, 952-954	5.5	4
11	Longitudinal Automatic Segmentation of Hippocampal Subfields (LASHIS) using multi-contrast MRI. <i>NeuroImage</i> , 2020 , 218, 116798	7.9	4
10	Influence of 7T GRE-MRI Signal Compartment Model Choice on Tissue Parameters. <i>Frontiers in Neuroscience</i> , 2020 , 14, 271	5.1	2
9	Modeling and suppression of respiration induced B0-fluctuations in non-balanced steady-state free precession sequences at 7 Tesla. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2013 , 26, 377-87	2.8	2
8	QSMxT: Robust masking and artifact reduction for quantitative susceptibility mapping. <i>Magnetic Resonance in Medicine</i> , 2021 ,	4.4	1
7	QSMxT: Robust Masking and Artefact Reduction for Quantitative Susceptibility Mapping		1
6	Improving FLAIR SAR efficiency at 7T by adaptive tailoring of adiabatic pulse power through deep learning estimation. <i>Magnetic Resonance in Medicine</i> , 2021 , 85, 2462-2476	4.4	1
5	Field strength influences on gradient recalled echo MRI signal compartment frequency shifts. <i>Magnetic Resonance Imaging</i> , 2020 , 70, 98-107	3.3	0
4	Functional Susceptibility Weighted Magnetic Resonance Imaging	561-575	
3	Automatic Vein Segmentation and Lesion Detection: From SWI-MIPs to MR Venograms	6056-618	

- 2 Towards Optimising MRI Characterisation of Tissue (TOMCAT) Dataset including all Longitudinal Automatic Segmentation of Hippocampal Subfields (LASHiS) data. *Data in Brief*, **2020**, 32, 106043 1.2
- 1 7-Tesla Functional Cardiovascular MR Using Vectorcardiographic Triggering-Overcoming the Magnetohydrodynamic Effect. *Tomography*, **2021**, 7, 323-332 3.1