Maxim Zaitsev

List of Publications by Year
in descending order

131	5,500	101543	91884
papers	citations	36 h-index	69 g-index

132	132	132	5164
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Motion artifacts in MRI: A complex problem with many partial solutions. Journal of Magnetic Resonance Imaging, 2015, 42, 887-901.	3.4	446
2	Time-resolved 3D MR velocity mapping at 3T: Improved navigator-gated assessment of vascular anatomy and blood flow. Journal of Magnetic Resonance Imaging, 2007, 25, 824-831.	3.4	363
3	Point spread function mapping with parallel imaging techniques and high acceleration factors: Fast, robust, and flexible method for echo-planar imaging distortion correction. Magnetic Resonance in Medicine, 2004, 52, 1156-1166.	3.0	339
4	Magnetic resonance imaging of freely moving objects: prospective real-time motion correction using an external optical motion tracking system. NeuroImage, 2006, 31, 1038-1050.	4.2	339
5	Prospective motion correction in brain imaging: A review. Magnetic Resonance in Medicine, 2013, 69, 621-636.	3.0	320
6	Measurement and Correction of Microscopic Head Motion during Magnetic Resonance Imaging of the Brain. PLoS ONE, 2012, 7, e48088.	2.5	177
7	Highest Resolution In Vivo Human Brain MRI Using Prospective Motion Correction. PLoS ONE, 2015, 10, e0133921.	2.5	138
8	Parallel imaging in non-bijective, curvilinear magnetic field gradients: a concept study. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2008, 21, 5-14.	2.0	125
9	Hybrid ultrasound MRI for improved cardiac imaging and realâ€time respiration control. Magnetic Resonance in Medicine, 2010, 63, 290-296.	3.0	112
10	Prospective motion correction in functional MRI. NeuroImage, 2017, 154, 33-42.	4.2	104
11	Prospective Real-Time Slice-by-Slice Motion Correction for fMRI in Freely Moving Subjects. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2006, 19, 55-61.	2.0	92
12	An embedded optical tracking system for motion-corrected magnetic resonance imaging at 7T. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2012, 25, 443-453.	2.0	91
13	Time-resolved, 3-Dimensional Magnetic Resonance Flow Analysis at 3 T. Journal of Computer Assisted Tomography, 2007, 31, 9-15.	0.9	90
14	Magnetic properties of materials for MR engineering, micro-MR and beyond. Journal of Magnetic Resonance, 2014, 242, 233-242.	2.1	89
15	High resolution single-shot EPI at 7T. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2008, 21, 73-86.	2.0	87
16	An evaluation of prospective motion correction (PMC) for high resolution quantitative MRI. Frontiers in Neuroscience, 2015, 9, 97.	2.8	84
17	Single shot concentric shells trajectories for ultra fast fMRI. Magnetic Resonance in Medicine, 2012, 68, 484-494.	3.0	81
18	Enhancement of temporal resolution and BOLD sensitivity in real-time fMRI using multi-slab echo-volumar imaging. NeuroImage, 2012, 61, 115-130.	4.2	78

#	Article	IF	Citations
19	FastT1 mapping with volume coverage. Magnetic Resonance in Medicine, 2001, 46, 131-140.	3.0	70
20	A New Method for Fast Multislice T1 Mapping. NeuroImage, 2001, 14, 1175-1185.	4.2	69
21	Quantitative T1 mapping of hepatic encephalopathy using magnetic resonance imaging. Hepatology, 2003, 38, 1219-1226.	7.3	67
22	Pulseq: A rapid and hardware-independent pulse sequence prototyping framework. Magnetic Resonance in Medicine, 2017, 77, 1544-1552.	3.0	66
23	Reconstruction of MRI data encoded with arbitrarily shaped, curvilinear, nonbijective magnetic fields. Magnetic Resonance in Medicine, 2010, 64, 1390-1403.	3.0	65
24	Simultaneously driven linear and nonlinear spatial encoding fields in MRI. Magnetic Resonance in Medicine, 2011, 65, 702-714.	3.0	65
25	Three-dimensional MR-encephalography: Fast volumetric brain imaging using rosette trajectories. Magnetic Resonance in Medicine, 2011, 65, 1260-1268.	3.0	59
26	Prospective motion correction with continuous gradient updates in diffusion weighted imaging. Magnetic Resonance in Medicine, 2012, 67, 326-338.	3.0	58
27	Functional MRI in human subjects with gradientâ€echo and spinâ€echo EPI at 9.4 T. Magnetic Resonance in Medicine, 2014, 71, 209-218.	3.0	57
28	Visualization of iliac and proximal femoral artery hemodynamics using time-resolved 3D phase contrast MRI at 3T. Journal of Magnetic Resonance Imaging, 2007, 25, 1085-1092.	3.4	54
29	Ballistocardiographic artifact removal from simultaneous EEG-fMRI using an optical motion-tracking system. NeuroImage, 2013, 75, 1-11.	4.2	53
30	Fast Undersampled Functional Magnetic Resonance Imaging Using Nonlinear Regularized Parallel Image Reconstruction. PLoS ONE, 2011, 6, e28822.	2.5	52
31	Singleâ€voxel MRS with prospective motion correction and retrospective frequency correction. NMR in Biomedicine, 2010, 23, 325-332.	2.8	51
32	Prospective motion correction for magnetic resonance spectroscopy using single camera retroâ€grate reflector optical tracking. Journal of Magnetic Resonance Imaging, 2011, 33, 498-504.	3.4	49
33	Navigator gated high temporal resolution tissue phase mapping of myocardial motion. Magnetic Resonance in Medicine, 2006, 55, 937-942.	3.0	48
34	Navigator accuracy requirements for prospective motion correction. Magnetic Resonance in Medicine, 2010, 63, 162-170.	3.0	44
35	Development and implementation of an 84â€channel matrix gradient coil. Magnetic Resonance in Medicine, 2018, 79, 1181-1191.	3.0	42
36	Reproduction of motion artifacts for performance analysis of prospective motion correction in MRI. Magnetic Resonance in Medicine, 2014, 71, 182-190.	3.0	40

#	Article	IF	Citations
37	Error reduction and parameter optimization of the TAPIR method for fastT1 mapping. Magnetic Resonance in Medicine, 2003, 49, 1121-1132.	3.0	38
38	Combining prospective motion correction and distortion correction for EPI: towards a comprehensive correction of motion and susceptibility-induced artifacts. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2010, 23, 263-273.	2.0	36
39	An improved PSF mapping method for EPI distortion correction in human brain at ultra high field (7T). Magnetic Resonance Materials in Physics, Biology, and Medicine, 2011, 24, 179-190.	2.0	33
40	Prospective slice-by-slice motion correction reduces false positive activations in fMRI with task-correlated motion. NeuroImage, 2014, 84, 124-132.	4.2	33
41	Pulseqâ€CEST: Towards multiâ€site multiâ€vendor compatibility and reproducibility of CEST experiments using an openâ€source sequence standard. Magnetic Resonance in Medicine, 2021, 86, 1845-1858.	3.0	33
42	Correction of frequency drifts induced by gradient heating in 1H spectra using interleaved reference spectroscopy. Journal of Magnetic Resonance Imaging, 2011, 33, 748-754.	3.4	32
43	Advantages and Limitations of Prospective Head Motion Compensation for MRI Using an Optical Motion Tracking Device. Academic Radiology, 2006, 13, 1093-1103.	2.5	31
44	Reconstruction of MRI data encoded by multiple nonbijective curvilinear magnetic fields. Magnetic Resonance in Medicine, 2012, 68, 1145-1156.	3.0	31
45	Localization by nonlinear phase preparation and kâ€space trajectory design. Magnetic Resonance in Medicine, 2012, 67, 1620-1632.	3.0	29
46	Fast functional brain imaging using constrained reconstruction based on regularization using arbitrary projections. Magnetic Resonance in Medicine, 2009, 62, 394-405.	3.0	28
47	Prospective motion correction of segmented diffusion weighted EPI. Magnetic Resonance in Medicine, 2015, 74, 1675-1681.	3.0	28
48	Reliable twoâ€dimensional phase unwrapping method using region growing and local linear estimation. Magnetic Resonance in Medicine, 2009, 62, 1085-1090.	3.0	27
49	Combined prospective and retrospective motion correction to relax navigator requirements. Magnetic Resonance in Medicine, 2011, 65, 1724-1732.	3.0	27
50	Distortion correction in EPI at ultraâ€highâ€field MRI using PSF mapping with optimal combination of shift detection dimension. Magnetic Resonance in Medicine, 2012, 68, 1239-1246.	3.0	27
51	Acceleration of MRI of the vocal tract provides additional insight into articulator modifications. Journal of Magnetic Resonance Imaging, 2015, 42, 925-935.	3.4	26
52	SENSE shimming (SSH): A fast approach for determining B₀ field inhomogeneities using sensitivity coding. Magnetic Resonance in Medicine, 2009, 62, 1319-1325.	3.0	24
53	Comparative T₂ and T_{1Ï} mapping of patellofemoral cartilage under in situ mechanical loading with prospective motion correction. Journal of Magnetic Resonance Imaging, 2017, 46, 452-460.	3.4	24
54	Design and implementation of a low-cost, tabletop MRI scanner for education and research prototyping. Journal of Magnetic Resonance, 2020, 310, 106625.	2.1	24

#	Article	IF	Citations
55	Reconstruction of undersampled radial PatLoc imaging using total generalized variation. Magnetic Resonance in Medicine, 2013, 70, 40-52.	3.0	23
56	Single shot trajectory design for region-specific imaging using linear and nonlinear magnetic encoding fields. Magnetic Resonance in Medicine, 2013, 70, 684-696.	3.0	23
57	Optical tracking with two markers for robust prospective motion correction for brain imaging. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2015, 28, 523-534.	2.0	23
58	Spectroscopic imaging with prospective motion correction and retrospective phase correction. Magnetic Resonance in Medicine, 2012, 67, 1506-1514.	3.0	22
59	Prevention of motionâ€induced signal loss in diffusionâ€weighted echoâ€planar imaging by dynamic restoration of gradient moments. Magnetic Resonance in Medicine, 2014, 71, 2006-2013.	3.0	22
60	Design of a shielded coil element of a matrix gradient coil. Journal of Magnetic Resonance, 2017, 281, 217-228.	2.1	22
61	One-second MRI of a three-dimensional vocal tract to measure dynamic articulator modifications. Journal of Magnetic Resonance Imaging, 2017, 46, 94-101.	3.4	22
62	A 32â€channel multiâ€coil setup optimized for human brain shimming at 9.4T. Magnetic Resonance in Medicine, 2020, 83, 749-764.	3.0	21
63	2D axial moving table acquisitions with dynamic slice adaptation. Magnetic Resonance in Medicine, 2006, 55, 423-430.	3.0	20
64	Dual-contrast echo planar imaging with keyhole: application to dynamic contrast-enhanced perfusion studies. Physics in Medicine and Biology, 2005, 50, 4491-4505.	3.0	19
65	Inversion recovery prepared turbo spin echo sequences with reduced SAR using smooth transitions between pseudo steady states. Magnetic Resonance in Medicine, 2007, 57, 631-637.	3.0	19
66	Pulseq-Graphical Programming Interface: Open source visual environment for prototyping pulse sequences and integrated magnetic resonance imaging algorithm development. Magnetic Resonance Imaging, 2018, 52, 9-15.	1.8	19
67	Practical considerations for in vivo MRI with higher dimensional spatial encoding. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2012, 25, 419-431.	2.0	18
68	Excitation and geometrically matched local encoding of curved slices. Magnetic Resonance in Medicine, 2013, 69, 1317-1325.	3.0	18
69	Diffusion kurtosis imaging does not improve differentiation performance of breast lesions in a short clinical protocol. Magnetic Resonance Imaging, 2019, 63, 205-216.	1.8	18
70	Knee cartilage MRI with in situ mechanical loading using prospective motion correction. Magnetic Resonance in Medicine, 2014, 71, 516-523.	3.0	17
71	Improving the robustness of 3D turbo spin echo imaging to involuntary motion. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2015, 28, 329-345.	2.0	17
72	Radial Imaging With Multipolar Magnetic Encoding Fields. IEEE Transactions on Medical Imaging, 2011, 30, 2134-2145.	8.9	16

#	Article	IF	Citations
73	An L1-norm phase constraint for half-Fourier compressed sensing in 3D MR imaging. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2015, 28, 459-472.	2.0	16
74	Intrinsic fat suppression in TIDE balanced steady-state free precession imaging. Magnetic Resonance in Medicine, 2006, 56, 1328-1335.	3.0	15
75	Performance evaluation of matrix gradient coils. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2016, 29, 59-73.	2.0	15
76	Iterative separation of transmit and receive phase contributions and B 1 + -based estimation of the specific absorption rate for transmit arrays. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2013, 26, 463-476.	2.0	14
77	MR image reconstruction from generalized projections. Magnetic Resonance in Medicine, 2014, 72, 546-557.	3.0	14
78	Accuracy and Precision of Head Motion Information in Multi-Channel Free Induction Decay Navigators for Magnetic Resonance Imaging. IEEE Transactions on Medical Imaging, 2015, 34, 1879-1889.	8.9	14
79	EEG-fMRI Gradient Artifact Correction by Multiple Motion-Related Templates. IEEE Transactions on Biomedical Engineering, 2016, 63, 2647-2653.	4.2	14
80	Design multiple-layer gradient coils using least-squares finite element method. Structural and Multidisciplinary Optimization, 2014, 49, 523-535.	3.5	13
81	Single-shot imaging with higher-dimensional encoding using magnetic field monitoring and concomitant field correction. Magnetic Resonance in Medicine, 2015, 73, 1340-1357.	3.0	13
82	Quantification of patellofemoral cartilage deformation and contact area changes in response to static loading via highâ€resolution MRI with prospective motion correction. Journal of Magnetic Resonance Imaging, 2019, 50, 1561-1570.	3.4	13
83	Prospective Head Motion Compensation for MRI by Updating the Gradients and Radio Frequency During Data Acquisition. Lecture Notes in Computer Science, 2005, 8, 482-489.	1.3	13
84	Selective excitation of twoâ€dimensional arbitrarily shaped voxels with parallel excitation in spectroscopy. Magnetic Resonance in Medicine, 2012, 67, 300-309.	3.0	12
85	Comparison of optical and MRâ€based tracking. Magnetic Resonance in Medicine, 2015, 74, 894-902.	3.0	12
86	Quantitative framework for prospective motion correction evaluation. Magnetic Resonance in Medicine, 2016, 75, 810-816.	3.0	12
87	Design of a shim coil array matched to the human brain anatomy. Magnetic Resonance in Medicine, 2020, 83, 1442-1457.	3.0	12
88	Optimized EPI for fMRI using a slice-dependent template-based gradient compensation method to recover local susceptibility-induced signal loss. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2010, 23, 165-176.	2.0	11
89	PexLocâ€”Parallel excitation using local encoding magnetic fields with nonlinear and nonbijective spatial profiles. Magnetic Resonance in Medicine, 2013, 70, 1220-1228.	3.0	11
90	Parallel imaging with phase scrambling. Magnetic Resonance in Medicine, 2015, 73, 1407-1419.	3.0	11

#	Article	IF	Citations
91	Local shape adaptation for curved slice selection. Magnetic Resonance in Medicine, 2014, 72, 112-123.	3.0	10
92	Fast noniterative calibration of an external motion tracking device. Magnetic Resonance in Medicine, 2014, 71, 1489-1500.	3.0	10
93	Optimization of Coil Element Configurations for a Matrix Gradient Coil. IEEE Transactions on Medical Imaging, 2018, 37, 284-292.	8.9	10
94	Stages: Subâ€Fourier dynamic shim updating using nonlinear magnetic field phase preparation. Magnetic Resonance in Medicine, 2014, 71, 57-66.	3.0	9
95	Trajectory optimization based on the signalâ€toâ€noise ratio for spatial encoding with nonlinear encoding fields. Magnetic Resonance in Medicine, 2016, 76, 104-117.	3.0	9
96	Design of small-scale gradient coils in magnetic resonance imaging by using the topology optimization method. Chinese Physics B, 2018, 27, 050201.	1.4	9
97	Improved SNR in linear reordered 2D bSSFP imaging using variable flip angles. Magnetic Resonance Imaging, 2009, 27, 933-941.	1.8	8
98	Monoplanar gradient system for imaging with nonlinear gradients. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2015, 28, 447-457.	2.0	8
99	Clinical Potential of a New Approach to MRI Acceleration. Scientific Reports, 2019, 9, 1912.	3.3	8
100	Threeâ€dimensional arbitrary voxel shapes in spectroscopy with submillisecond TEs. NMR in Biomedicine, 2012, 25, 1000-1006.	2.8	7
101	Development and Characterization of An Unshielded PatLoc Gradient Coil for Human Head Imaging. Concepts in Magnetic Resonance Part B, 2013, 43, 111-125.	0.7	7
102	Marker-based ballistocardiographic artifact correction improves spike identification in EEG-fMRI of focal epilepsy patients. Clinical Neurophysiology, 2016, 127, 2802-2811.	1.5	7
103	Accelerated point spread function mapping using signal modeling for accurate echoâ€planar imaging geometric distortion correction. Magnetic Resonance in Medicine, 2013, 69, 1650-1656.	3.0	6
104	Image reconstruction in kâ€space from MR data encoded with ambiguous gradient fields. Magnetic Resonance in Medicine, 2015, 73, 857-864.	3.0	6
105	A Spherical Harmonics Decomposition Method (SHDM) for Irregular Matrix Coils Design. IEEE Transactions on Biomedical Engineering, 2022, 69, 1292-1301.	4.2	6
106	Strategies to improve intratrain prospective motion correction for turbo spinâ€echo sequences with constant flip angles. Magnetic Resonance in Medicine, 2021, 86, 852-865.	3.0	6
107	MR-compatible optical microscope for in-situ dual-mode MR-optical microscopy. PLoS ONE, 2021, 16, e0250903.	2.5	6
108	Extended multiâ€flipâ€angle B₁ mapping: A 3D mapping method for inhomogeneous B₁ fields. Concepts in Magnetic Resonance Part B, 2010, 37B, 203-214.	0.7	5

#	Article	IF	Citations
109	Local field of view imaging for aliasâ€free undersampling with nonlinear spatial encoding magnetic fields. Magnetic Resonance in Medicine, 2014, 71, 1002-1014.	3.0	5
110	A gâ€factor metric for kâ€tâ€GRAPPAâ€and PEAKâ€GRAPPAâ€based parallel imaging. Magnetic Resonance in Medicine, 2015, 74, 125-135.	3.0	5
111	Motion correction for diffusion weighted SMS imaging. Magnetic Resonance Imaging, 2017, 38, 33-38.	1.8	5
112	Design of a high-performance non-linear gradient coil for diffusion weighted MRI of the breast. Journal of Magnetic Resonance, 2021, 331, 107052.	2.1	5
113	Implementation and Application of PSF-Based EPI Distortion Correction to High Field Animal Imaging. International Journal of Biomedical Imaging, 2009, 2009, 1-7.	3.9	4
114	Incorporation of image data from a previous examination in 3D serial MR imaging. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2015, 28, 413-425.	2.0	4
115	Design of a 3T preamplifier which stability is insensitive to coil loading. Journal of Magnetic Resonance, 2016, 265, 215-223.	2.1	4
116	Direct matching methods for coils and preamplifiers in MRI. Journal of Magnetic Resonance, 2018, 290, 85-91.	2.1	4
117	Frequencyâ€adjustable magnetic field probes. Magnetic Resonance in Medicine, 2021, 85, 1123-1133.	3.0	4
118	Threeâ€dimensional spatially resolved phase graph framework. Magnetic Resonance in Medicine, 2021, 86, 551-560.	3.0	4
119	Switching Circuit Optimization for Matrix Gradient Coils. Tomography, 2019, 5, 248-259.	1.8	4
120	CoilGen: Openâ€source MR coil layout generator. Magnetic Resonance in Medicine, 2022, 88, 1465-1479.	3.0	4
121	Direct Magnetic Field Estimation Based on Echo Planar Raw Data. IEEE Transactions on Medical Imaging, 2010, 29, 1401-1411.	8.9	3
122	An adaptive MRâ€compatible lens and objective. Concepts in Magnetic Resonance Part B, 2011, 39B, 141-148.	0.7	3
123	The noise factor of receiver coil matching networks in MRI. Magnetic Resonance Imaging, 2017, 37, 252-259.	1.8	3
124	High resolution CBV assessment with PEAK-EPI: k-t-undersampling and reconstruction in echo planar imaging. Magnetic Resonance in Medicine, 2017, 77, 2153-2166.	3.0	3
125	Combining prospective and retrospective motion correction based on a model for fast continuous motion. Magnetic Resonance in Medicine, 2021, 86, 1284-1298.	3.0	3
126	Single shot spiral <scp>TSE</scp> with annulated segmentation. Magnetic Resonance in Medicine, 2022, 88, 651-662.	3.0	3

#	Article	IF	Citations
127	3D localized lactate detection in muscle tissue using doubleâ€quantum filtered 1 H MRS with adiabatic refocusing pulses at 7ÂT. Magnetic Resonance in Medicine, 2021, , .	3.0	2
128	Magnetic modeling of actively shielded rotating MRI magnets in the presence of environmental steel. Physics in Medicine and Biology, 2021, 66, 045004.	3.0	1
129	Methods: Of Stream Functions and Thin Wires: An Intuitive Approach to Gradient Coil Design. Frontiers in Physics, 2021, 9, .	2.1	1
130	Multislice localized parallel excitation for <scp>EPI</scp> applications in humans. Concepts in Magnetic Resonance Part B, 2015, 45, 153-173.	0.7	0
131	Improved Image Segmentation with Prospective Motion Correction in MRI. Informatik Aktuell, 2012, , 27-32.	0.6	0