

Maxim Zaitsev

List of Publications by Year in descending order

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131
papers

5,500
citations

101543

36
h-index

91884

69
g-index

132
all docs

132
docs citations

132
times ranked

5164
citing authors

#	ARTICLE	IF	CITATIONS
1	A Spherical Harmonics Decomposition Method (SHDM) for Irregular Matrix Coils Design. IEEE Transactions on Biomedical Engineering, 2022, 69, 1292-1301.	4.2	6
2	Single shot spiral <scp>TSE</scp> with annulated segmentation. Magnetic Resonance in Medicine, 2022, 88, 651-662.	3.0	3
3	CoilGen: Open-source MR coil layout generator. Magnetic Resonance in Medicine, 2022, 88, 1465-1479.	3.0	4
4	Frequency-adjustable magnetic field probes. Magnetic Resonance in Medicine, 2021, 85, 1123-1133.	3.0	4
5	Three-dimensional spatially resolved phase graph framework. Magnetic Resonance in Medicine, 2021, 86, 551-560.	3.0	4
6	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
7	Strategies to improve intratrain prospective motion correction for turbo spin-echo sequences with constant flip angles. Magnetic Resonance in Medicine, 2021, 86, 852-865.	3.0	6
8	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
9	Pulse-CEST: Towards multi-site multi-vendor compatibility and reproducibility of CEST experiments using an open-source sequence standard. Magnetic Resonance in Medicine, 2021, 86, 1845-1858.	3.0	33
10	MR-compatible optical microscope for in-situ dual-mode MR-optical microscopy. PLoS ONE, 2021, 16, e0250903.	2.5	6
11	Methods: Of Stream Functions and Thin Wires: An Intuitive Approach to Gradient Coil Design. Frontiers in Physics, 2021, 9, .	2.1	1
12	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
13	3D localized lactate detection in muscle tissue using double-quantum filtered 1 H MRS with adiabatic refocusing pulses at 7T. Magnetic Resonance in Medicine, 2021, , .	3.0	2
14	Design of a shim coil array matched to the human brain anatomy. Magnetic Resonance in Medicine, 2020, 83, 1442-1457.	3.0	12
15	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
16	A 32-channel multi-coil setup optimized for human brain shimming at 9.4T. Magnetic Resonance in Medicine, 2020, 83, 749-764.	3.0	21
17	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
18	Quantification of patellofemoral cartilage deformation and contact area changes in response to static loading via high-resolution MRI with prospective motion correction. Journal of Magnetic Resonance Imaging, 2019, 50, 1561-1570.	3.4	13

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19	Clinical Potential of a New Approach to MRI Acceleration. Scientific Reports, 2019, 9, 1912.	3.3	8
20	Switching Circuit Optimization for Matrix Gradient Coils. Tomography, 2019, 5, 248-259.	1.8	4
21	Optimization of Coil Element Configurations for a Matrix Gradient Coil. IEEE Transactions on Medical Imaging, 2018, 37, 284-292.	8.9	10
22	Direct matching methods for coils and preamplifiers in MRI. Journal of Magnetic Resonance, 2018, 290, 85-91.	2.1	4
23	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
24	Development and implementation of an 84-channel matrix gradient coil. Magnetic Resonance in Medicine, 2018, 79, 1181-1191.	3.0	42
25	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
26	Pulseq: A rapid and hardware-independent pulse sequence prototyping framework. Magnetic Resonance in Medicine, 2017, 77, 1544-1552.	3.0	66
27	Comparative T_2 and T_1 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
28	Design of a shielded coil element of a matrix gradient coil. Journal of Magnetic Resonance, 2017, 281, 217-228.	2.1	22
29	Motion correction for diffusion weighted SMS imaging. Magnetic Resonance Imaging, 2017, 38, 33-38.	1.8	5
30	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
31	Prospective motion correction in functional MRI. NeuroImage, 2017, 154, 33-42.	4.2	104
32	The noise factor of receiver coil matching networks in MRI. Magnetic Resonance Imaging, 2017, 37, 252-259.	1.8	3
33	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
34	Marker-based ballistocardiographic artifact correction improves spike identification in EEG-fMRI of focal epilepsy patients. Clinical Neurophysiology, 2016, 127, 2802-2811.	1.5	7
35	EEG-fMRI Gradient Artifact Correction by Multiple Motion-Related Templates. IEEE Transactions on Biomedical Engineering, 2016, 63, 2647-2653.	4.2	14
36	Quantitative framework for prospective motion correction evaluation. Magnetic Resonance in Medicine, 2016, 75, 810-816.	3.0	12

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37	Trajectory optimization based on the signal-to-noise ratio for spatial encoding with nonlinear encoding fields. <i>Magnetic Resonance in Medicine</i> , 2016, 76, 104-117.	3.0	9
38	Performance evaluation of matrix gradient coils. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2016, 29, 59-73.	2.0	15
39	Design of a 3T preamplifier which stability is insensitive to coil loading. <i>Journal of Magnetic Resonance</i> , 2016, 265, 215-223.	2.1	4
40	Parallel imaging with phase scrambling. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 1407-1419.	3.0	11
41	Image reconstruction in k -space from MR data encoded with ambiguous gradient fields. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 857-864.	3.0	6
42	Single-shot imaging with higher-dimensional encoding using magnetic field monitoring and concomitant field correction. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 1340-1357.	3.0	13
43	Acceleration of MRI of the vocal tract provides additional insight into articulator modifications. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 42, 925-935.	3.4	26
44	Multislice localized parallel excitation for EPI applications in humans. <i>Concepts in Magnetic Resonance Part B</i> , 2015, 45, 153-173.	0.7	0
45	An evaluation of prospective motion correction (PMC) for high resolution quantitative MRI. <i>Frontiers in Neuroscience</i> , 2015, 9, 97.	2.8	84
46	Highest Resolution In Vivo Human Brain MRI Using Prospective Motion Correction. <i>PLoS ONE</i> , 2015, 10, e0133921.	2.5	138
47	Prospective motion correction of segmented diffusion weighted EPI. <i>Magnetic Resonance in Medicine</i> , 2015, 74, 1675-1681.	3.0	28
48	Accuracy and Precision of Head Motion Information in Multi-Channel Free Induction Decay Navigators for Magnetic Resonance Imaging. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 1879-1889.	8.9	14
49	Incorporation of image data from a previous examination in 3D serial MR imaging. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2015, 28, 413-425.	2.0	4
50	Improving the robustness of 3D turbo spin echo imaging to involuntary motion. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2015, 28, 329-345.	2.0	17
51	An L1-norm phase constraint for half-Fourier compressed sensing in 3D MR imaging. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2015, 28, 459-472.	2.0	16
52	Monoplanar gradient system for imaging with nonlinear gradients. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2015, 28, 447-457.	2.0	8
53	Optical tracking with two markers for robust prospective motion correction for brain imaging. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2015, 28, 523-534.	2.0	23
54	Motion artifacts in MRI: A complex problem with many partial solutions. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 42, 887-901.	3.4	446

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55	A g-factor metric for k-t GRAPPA and PEAK-based parallel imaging. Magnetic Resonance in Medicine, 2015, 74, 125-135.	3.0	5
56	Comparison of optical and MR-based tracking. Magnetic Resonance in Medicine, 2015, 74, 894-902.	3.0	12
57	Local shape adaptation for curved slice selection. Magnetic Resonance in Medicine, 2014, 72, 112-123.	3.0	10
58	MR image reconstruction from generalized projections. Magnetic Resonance in Medicine, 2014, 72, 546-557.	3.0	14
59	Functional MRI in human subjects with gradient-echo and spin-echo EPI at 9.4 T. Magnetic Resonance in Medicine, 2014, 71, 209-218.	3.0	57
60	Design multiple-layer gradient coils using least-squares finite element method. Structural and Multidisciplinary Optimization, 2014, 49, 523-535.	3.5	13
61	Magnetic properties of materials for MR engineering, micro-MR and beyond. Journal of Magnetic Resonance, 2014, 242, 233-242.	2.1	89
62	Prospective slice-by-slice motion correction reduces false positive activations in fMRI with task-correlated motion. NeuroImage, 2014, 84, 124-132.	4.2	33
63	Prevention of motion-induced signal loss in diffusion-weighted echo-planar imaging by dynamic restoration of gradient moments. Magnetic Resonance in Medicine, 2014, 71, 2006-2013.	3.0	22
64	Stages: Sub-Fourier dynamic shim updating using nonlinear magnetic field phase preparation. Magnetic Resonance in Medicine, 2014, 71, 57-66.	3.0	9
65	Reproduction of motion artifacts for performance analysis of prospective motion correction in MRI. Magnetic Resonance in Medicine, 2014, 71, 182-190.	3.0	40
66	Fast noniterative calibration of an external motion tracking device. Magnetic Resonance in Medicine, 2014, 71, 1489-1500.	3.0	10
67	Local field of view imaging for alias-free undersampling with nonlinear spatial encoding magnetic fields. Magnetic Resonance in Medicine, 2014, 71, 1002-1014.	3.0	5
68	Knee cartilage MRI with in situ mechanical loading using prospective motion correction. Magnetic Resonance in Medicine, 2014, 71, 516-523.	3.0	17
69	Prospective motion correction in brain imaging: A review. Magnetic Resonance in Medicine, 2013, 69, 621-636.	3.0	320
70	Excitation and geometrically matched local encoding of curved slices. Magnetic Resonance in Medicine, 2013, 69, 1317-1325.	3.0	18
71	Accelerated point spread function mapping using signal modeling for accurate echo-planar imaging geometric distortion correction. Magnetic Resonance in Medicine, 2013, 69, 1650-1656.	3.0	6
72	Reconstruction of undersampled radial PatLoc imaging using total generalized variation. Magnetic Resonance in Medicine, 2013, 70, 40-52.	3.0	23

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73	Ballistocardiographic artifact removal from simultaneous EEG-fMRI using an optical motion-tracking system. <i>NeuroImage</i> , 2013, 75, 1-11.	4.2	53
74	Iterative separation of transmit and receive phase contributions and B ₁ + -based estimation of the specific absorption rate for transmit arrays. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2013, 26, 463-476.	2.0	14
75	Single shot trajectory design for region-specific imaging using linear and nonlinear magnetic encoding fields. <i>Magnetic Resonance in Medicine</i> , 2013, 70, 684-696.	3.0	23
76	Development and Characterization of An Unshielded PatLoc Gradient Coil for Human Head Imaging. <i>Concepts in Magnetic Resonance Part B</i> , 2013, 43, 111-125.	0.7	7
77	PexLoc™ Parallel excitation using local encoding magnetic fields with nonlinear and nonbijective spatial profiles. <i>Magnetic Resonance in Medicine</i> , 2013, 70, 1220-1228.	3.0	11
78	Practical considerations for in vivo MRI with higher dimensional spatial encoding. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2012, 25, 419-431.	2.0	18
79	An embedded optical tracking system for motion-corrected magnetic resonance imaging at 7T. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2012, 25, 443-453.	2.0	91
80	Enhancement of temporal resolution and BOLD sensitivity in real-time fMRI using multi-slab echo-volumar imaging. <i>NeuroImage</i> , 2012, 61, 115-130.	4.2	78
81	Measurement and Correction of Microscopic Head Motion during Magnetic Resonance Imaging of the Brain. <i>PLoS ONE</i> , 2012, 7, e48088.	2.5	177
82	Spectroscopic imaging with prospective motion correction and retrospective phase correction. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 1506-1514.	3.0	22
83	Localization by nonlinear phase preparation and k -space trajectory design. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 1620-1632.	3.0	29
84	Single shot concentric shells trajectories for ultra fast fMRI. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 484-494.	3.0	81
85	Distortion correction in EPI at ultra-high field MRI using PSF mapping with optimal combination of shift detection dimension. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 1239-1246.	3.0	27
86	Reconstruction of MRI data encoded by multiple nonbijective curvilinear magnetic fields. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 1145-1156.	3.0	31
87	Three-dimensional arbitrary voxel shapes in spectroscopy with submillisecond TEs. <i>NMR in Biomedicine</i> , 2012, 25, 1000-1006.	2.8	7
88	Selective excitation of two-dimensional arbitrarily shaped voxels with parallel excitation in spectroscopy. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 300-309.	3.0	12
89	Prospective motion correction with continuous gradient updates in diffusion weighted imaging. <i>Magnetic Resonance in Medicine</i> , 2012, 67, 326-338.	3.0	58
90	Improved Image Segmentation with Prospective Motion Correction in MRI. <i>Informatik Aktuell</i> , 2012, , 27-32.	0.6	0

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91	Fast Undersampled Functional Magnetic Resonance Imaging Using Nonlinear Regularized Parallel Image Reconstruction. PLoS ONE, 2011, 6, e28822.	2.5	52
92	Radial Imaging With Multipolar Magnetic Encoding Fields. IEEE Transactions on Medical Imaging, 2011, 30, 2134-2145.	8.9	16
93	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
94	Prospective motion correction for magnetic resonance spectroscopy using single camera retrograde reflector optical tracking. Journal of Magnetic Resonance Imaging, 2011, 33, 498-504.	3.4	49
95	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
96	Simultaneously driven linear and nonlinear spatial encoding fields in MRI. Magnetic Resonance in Medicine, 2011, 65, 702-714.	3.0	65
97	Three-dimensional MR-encephalography: Fast volumetric brain imaging using rosette trajectories. Magnetic Resonance in Medicine, 2011, 65, 1260-1268.	3.0	59
98	Combined prospective and retrospective motion correction to relax navigator requirements. Magnetic Resonance in Medicine, 2011, 65, 1724-1732.	3.0	27
99	An adaptive MR-compatible lens and objective. Concepts in Magnetic Resonance Part B, 2011, 39B, 141-148.	0.7	3
100	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
101	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
102	Direct Magnetic Field Estimation Based on Echo Planar Raw Data. IEEE Transactions on Medical Imaging, 2010, 29, 1401-1411.	8.9	3
103	Single-voxel MRS with prospective motion correction and retrospective frequency correction. NMR in Biomedicine, 2010, 23, 325-332.	2.8	51
104	Extended multi-Flip-angle B_1 mapping: A 3D mapping method for inhomogeneous B_1 fields. Concepts in Magnetic Resonance Part B, 2010, 37B, 203-214.	0.7	5
105	Navigator accuracy requirements for prospective motion correction. Magnetic Resonance in Medicine, 2010, 63, 162-170.	3.0	44
106	Hybrid ultrasound MRI for improved cardiac imaging and real-time respiration control. Magnetic Resonance in Medicine, 2010, 63, 290-296.	3.0	112
107	Reconstruction of MRI data encoded with arbitrarily shaped, curvilinear, nonbijective magnetic fields. Magnetic Resonance in Medicine, 2010, 64, 1390-1403.	3.0	65
108	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

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109	Fast functional brain imaging using constrained reconstruction based on regularization using arbitrary projections. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 394-405.	3.0	28
110	Reliable two-dimensional phase unwrapping method using region growing and local linear estimation. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 1085-1090.	3.0	27
111	SENSE shimming (SSH): A fast approach for determining B_0 field inhomogeneities using sensitivity coding. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 1319-1325.	3.0	24
112	Improved SNR in linear reordered 2D bSSFP imaging using variable flip angles. <i>Magnetic Resonance Imaging</i> , 2009, 27, 933-941.	1.8	8
113	High resolution single-shot EPI at 7T. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2008, 21, 73-86.	2.0	87
114	Parallel imaging in non-bijective, curvilinear magnetic field gradients: a concept study. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2008, 21, 5-14.	2.0	125
115	Time-resolved, 3-Dimensional Magnetic Resonance Flow Analysis at 3 T. <i>Journal of Computer Assisted Tomography</i> , 2007, 31, 9-15.	0.9	90
116	Inversion recovery prepared turbo spin echo sequences with reduced SAR using smooth transitions between pseudo steady states. <i>Magnetic Resonance in Medicine</i> , 2007, 57, 631-637.	3.0	19
117	Time-resolved 3D MR velocity mapping at 3T: Improved navigator-gated assessment of vascular anatomy and blood flow. <i>Journal of Magnetic Resonance Imaging</i> , 2007, 25, 824-831.	3.4	363
118	Visualization of iliac and proximal femoral artery hemodynamics using time-resolved 3D phase contrast MRI at 3T. <i>Journal of Magnetic Resonance Imaging</i> , 2007, 25, 1085-1092.	3.4	54
119	Magnetic resonance imaging of freely moving objects: prospective real-time motion correction using an external optical motion tracking system. <i>NeuroImage</i> , 2006, 31, 1038-1050.	4.2	339
120	Advantages and Limitations of Prospective Head Motion Compensation for MRI Using an Optical Motion Tracking Device. <i>Academic Radiology</i> , 2006, 13, 1093-1103.	2.5	31
121	Prospective Real-Time Slice-by-Slice Motion Correction for fMRI in Freely Moving Subjects. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2006, 19, 55-61.	2.0	92
122	2D axial moving table acquisitions with dynamic slice adaptation. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 423-430.	3.0	20
123	Navigator gated high temporal resolution tissue phase mapping of myocardial motion. <i>Magnetic Resonance in Medicine</i> , 2006, 55, 937-942.	3.0	48
124	Intrinsic fat suppression in TIDE balanced steady-state free precession imaging. <i>Magnetic Resonance in Medicine</i> , 2006, 56, 1328-1335.	3.0	15
125	Dual-contrast echo planar imaging with keyhole: application to dynamic contrast-enhanced perfusion studies. <i>Physics in Medicine and Biology</i> , 2005, 50, 4491-4505.	3.0	19
126	Prospective Head Motion Compensation for MRI by Updating the Gradients and Radio Frequency During Data Acquisition. <i>Lecture Notes in Computer Science</i> , 2005, 8, 482-489.	1.3	13

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127	Point spread function mapping with parallel imaging techniques and high acceleration factors: Fast, robust, and flexible method for echo-planar imaging distortion correction. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 1156-1166.	3.0	339
128	Quantitative T1 mapping of hepatic encephalopathy using magnetic resonance imaging. <i>Hepatology</i> , 2003, 38, 1219-1226.	7.3	67
129	Error reduction and parameter optimization of the TAPIR method for fastT1 mapping. <i>Magnetic Resonance in Medicine</i> , 2003, 49, 1121-1132.	3.0	38
130	A New Method for Fast Multislice T1 Mapping. <i>NeuroImage</i> , 2001, 14, 1175-1185.	4.2	69
131	FastT1 mapping with volume coverage. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 131-140.	3.0	70