Berkin Bilgic

List of Publications by Year
in descending order

79 papers	3,493 citations	172457 29 h-index	161849 54 g-index
82 all docs	82 docs citations	82 times ranked	3308 citing authors

#	ARTICLE	IF	CITATIONS
1	Rapid simultaneous acquisition of macromolecular tissue volume, susceptibility, and relaxometry maps. Magnetic Resonance in Medicine, 2022, 87, 781-790.	3.0	3
2	Scanâ€specific artifact reduction in kâ€space (SPARK) neural networks synergize with physicsâ€based reconstruction to accelerate MRI. Magnetic Resonance in Medicine, 2022, 87, 764-780.	3.0	19
3	Optimization of magnetization transfer contrast for EPI FLAIR brain imaging. Magnetic Resonance in Medicine, 2022, 87, 2380-2387.	3.0	4
4	Highâ€fidelity fast volumetric brain MRI using synergistic waveâ€controlled aliasing in parallel imaging and a hybrid denoising generative adversarial network (HDnGAN). Medical Physics, 2022, 49, 1000-1014.	3.0	9
5	Optimized multiâ€axis spiral projection <scp>MR</scp> fingerprinting with subspace reconstruction for rapid wholeâ€brain highâ€isotropicâ€resolution quantitative imaging. Magnetic Resonance in Medicine, 2022, 88, 133-150.	3.0	14
6	<scp>BUDAâ€MESMERISE</scp>: Rapid acquisition and unsupervised parameter estimation for <scp>T₁</scp>, <scp>T₂</scp>, <scp>M₀</scp>, <scp>B₀</scp>, and <scp>B₁</scp> maps. Magnetic Resonance in Medicine, 2022, 88, 292-308.	3.0	4
7	SDnDTI: Self-supervised deep learning-based denoising for diffusion tensor MRI. NeuroImage, 2022, 253, 119033.	4.2	31
8	Mapping the human connectome using diffusion MRI at 300 mT/m gradient strength: Methodological advances and scientific impact. NeuroImage, 2022, 254, 118958.	4.2	18
9	An artificial intelligenceâ€accelerated 2â€minute multiâ€shot echo planar imaging protocol for comprehensive highâ€quality clinical brain imaging. Magnetic Resonance in Medicine, 2022, 87, 2453-2463.	3.0	9
10	Blip upâ€down acquisition for spinâ€and gradientâ€echo imaging (<scp>BUDAâ€SAGE</scp>) with selfâ€supervised denoising enables efficient <scp>T₂</scp>, <scp>T₂</scp>*, paraâ€and diaâ€magnetic susceptibility mapping. Magnetic Resonance in Medicine, 2022, 88, 633-650.	3.0	15
11	Liver-Buda-Sage: Simultaneous Whole Liver T₂ and T*₂ Mapping in one Breath-Hold. , 2022, , .		1
12	Highly accelerated <scp>EPI</scp> with wave encoding and multiâ€shot simultaneous multislice imaging. Magnetic Resonance in Medicine, 2022, 88, 1180-1197.	3.0	3
13	Comparison of parameter optimization methods for quantitative susceptibility mapping. Magnetic Resonance in Medicine, 2021, 85, 480-494.	3.0	12
14	Improving <i>in vivo</i> human cerebral cortical surface reconstruction using data-driven super-resolution. Cerebral Cortex, 2021, 31, 463-482.	2.9	17
15	QSM reconstruction challenge 2.0: A realistic in silico head phantom for MRI data simulation and evaluation of susceptibility mapping procedures. Magnetic Resonance in Medicine, 2021, 86, 526-542.	3.0	34
16	Distortionâ€free, highâ€isotropicâ€resolution diffusion MRI with gSlider BUDAâ€EPI and multicoil dynamic B₀ shimming. Magnetic Resonance in Medicine, 2021, 86, 791-803.	3.0	31
17	A multiâ€inversion multiâ€echo spin and gradient echo echo planar imaging sequence with low image distortion for rapid quantitative parameter mapping and synthetic image contrasts. Magnetic Resonance in Medicine, 2021, 86, 866-880.	3.0	11
18	QSM reconstruction challenge 2.0: Design and report of results. Magnetic Resonance in Medicine, 2021, 86, 1241-1255.	3.0	30

#	ARTICLE	IF	CITATIONS
19	Variable flip angle echo planar time-resolved imaging (vFA-EPTI) for fast high-resolution gradient echo myelin water imaging. NeuroImage, 2021, 232, 117897.	4.2	22
20	Efficient T_2 mapping with blip–up/down EPI and gSlider–SMS (T_2–BUDA–gSlider). Magnetic Resonance in Medicine, 2021, 86, 2064-2075.	3.0	13
21	Improved cortical surface reconstruction using sub-millimeter resolution MPRAGE by image denoising. NeuroImage, 2021, 233, 117946.	4.2	11
22	A 48-channel receive array coil for mesoscopic diffusion-weighted MRI of exÂvivo human brain on the 3 T connectome scanner. NeuroImage, 2021, 238, 118256.	4.2	13
23	Connectome 2.0: Developing the next-generation ultra-high gradient strength human MRI scanner for bridging studies of the micro-, meso- and macro-connectome. NeuroImage, 2021, 243, 118530.	4.2	58
24	High-fidelity approximation of grid- and shell-based sampling schemes from undersampled DSI using compressed sensing: Post mortem validation. NeuroImage, 2021, 244, 118621.	4.2	11
25	High–fidelity, high–isotropic–resolution diffusion imaging through gSlider acquisition with and T 1 corrections and integrated I" B 0 / Rx shim array. Magnetic Resonance in Medicine, 2020, 83, 56-67.	3.0	31
26	Accelerated spin–echo functional MRI using multisection excitation by simultaneous spin–echo interleaving (MESSI) with complex–encoded generalized slice dithered enhanced resolution (cgSlider) simultaneous multislice echo–planar imaging. Magnetic Resonance in Medicine, 2020, 84, 206-220.	3.0	8
27	DeepDTI: High-fidelity six-direction diffusion tensor imaging using deep learning. NeuroImage, 2020, 219, 117017.	4.2	63
28	Joint multi–contrast variational network reconstruction (jVN) with application to rapid 2D and 3D imaging. Magnetic Resonance in Medicine, 2020, 84, 1456-1469.	3.0	28
29	The 2016 QSM Challenge: Lessons learned and considerations for a future challenge design. Magnetic Resonance in Medicine, 2020, 84, 1624-1637.	3.0	18
30	Nonlinear dipole inversion (NDI) enables robust quantitative susceptibility mapping (QSM). NMR in Biomedicine, 2020, 33, e4271.	2.8	39
31	Echo planar time–resolved imaging with subspace reconstruction and optimized spatiotemporal encoding. Magnetic Resonance in Medicine, 2020, 84, 2442-2455.	3.0	28
32	Echo planar time–resolved imaging (EPTI). Magnetic Resonance in Medicine, 2019, 81, 3599-3615.	3.0	75
33	Accelerated whole–brain perfusion imaging using a simultaneous multislice spin–echo and gradient–echo sequence with joint virtual coil reconstruction. Magnetic Resonance in Medicine, 2019, 82, 973-983.	3.0	10
34	Highly accelerated multishot echo planar imaging through synergistic machine learning and joint reconstruction. Magnetic Resonance in Medicine, 2019, 82, 1343-1358.	3.0	40
35	Network Accelerated Motion Estimation and Reduction (NAMER): Convolutional neural network guided retrospective motion correction using a separable motion model. Magnetic Resonance in Medicine, 2019, 82, 1452-1461.	3.0	67
36	Phase-matched virtual coil reconstruction for highly accelerated diffusion echo-planar imaging. NeuroImage, 2019, 194, 291-302.	4.2	19

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37	Highly‐accelerated volumetric brain examination using optimized wave‐CAIPI encoding. Journal of Magnetic Resonance Imaging, 2019, 50, 961-974.	3.4	44
38	Tilted‐CAIPI for highly accelerated distortion‐free EPI with point spread function (PSF) encoding. Magnetic Resonance in Medicine, 2019, 81, 377-392.	3.0	37
39	Characterization of normal-appearing white matter in multiple sclerosis using quantitative susceptibility mapping in conjunction with diffusion tensor imaging. Neuroradiology, 2019, 61, 71-79.	2.2	24
40	Weak‐harmonic regularization for quantitative susceptibility mapping. Magnetic Resonance in Medicine, 2019, 81, 1399-1411.	3.0	19
41	Wave‐LORAKS: Combining wave encoding with structured low‐rank matrix modeling for more highly accelerated 3D imaging. Magnetic Resonance in Medicine, 2019, 81, 1620-1633.	3.0	24
42	Highly efficient MRI through multi-shot echo planar imaging. , 2019, , .		10
43	Motion‐robust sub‐millimeter isotropic diffusion imaging through motion corrected generalized slice dithered enhanced resolution (MC‐gSlider) acquisition. Magnetic Resonance in Medicine, 2018, 80, 1891-1906.	3.0	28
44	Wave‐CAIPI ViSTa: highly accelerated whole‐brain direct myelin water imaging with zero‐padding reconstruction. Magnetic Resonance in Medicine, 2018, 80, 1061-1073.	3.0	10
45	Improving parallel imaging by jointly reconstructing multi‐contrast data. Magnetic Resonance in Medicine, 2018, 80, 619-632.	3.0	62
46	Fast nonlinear susceptibility inversion with variational regularization. Magnetic Resonance in Medicine, 2018, 80, 814-821.	3.0	55
47	Wave‐CAIPI for highly accelerated MP‐RAGE imaging. Magnetic Resonance in Medicine, 2018, 79, 401-406.	3.0	53
48	High‐resolution in vivo diffusion imaging of the human brain with generalized slice dithered enhanced resolution: Simultaneous multislice (gSlider‐SMS). Magnetic Resonance in Medicine, 2018, 79, 141-151.	3.0	134
49	Quantitative susceptibility mapping: Report from the 2016 reconstruction challenge. Magnetic Resonance in Medicine, 2018, 79, 1661-1673.	3.0	151
50	Quantitative susceptibility mapping using deep neural network: QSMnet. NeuroImage, 2018, 179, 199-206.	4.2	115
51	Single‐step quantitative susceptibility mapping with variational penalties. NMR in Biomedicine, 2017, 30, e3570.	2.8	50
52	Mitigation of partial volume effects in susceptibility-based oxygenation measurements by joint utilization of magnitude and phase (JUMP). Magnetic Resonance in Medicine, 2017, 77, 1713-1727.	3.0	9
53	Simultaneous multislice magnetic resonance fingerprinting (SMS‐MRF) with direct‐spiral slice‐GRAPPA (ds‐SG) reconstruction. Magnetic Resonance in Medicine, 2017, 77, 1966-1974.	3.0	35
54	Susceptibility-Based Neuroimaging: Standard Methods, Clinical Applications, and Future Directions. Current Radiology Reports, 2017, 5, 1.	1.4	6

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55	Model‐based iterative reconstruction for single‐shot EPI at 7T. Magnetic Resonance in Medicine, 2017, 78, 2250-2264.	3.0	13
56	Simultaneous Time Interleaved MultiSlice (STIMS) for Rapid Susceptibility Weighted acquisition. NeuroImage, 2017, 155, 577-586.	4.2	21
57	3D MR fingerprinting with accelerated stack-of-spirals and hybrid sliding-window and GRAPPA reconstruction. NeuroImage, 2017, 162, 13-22.	4.2	87
58	Autocalibrated wave‐CAIPI reconstruction; Joint optimization of k‐space trajectory and parallel imaging reconstruction. Magnetic Resonance in Medicine, 2017, 78, 1093-1099.	3.0	47
59	Vectorial total generalized variation for accelerated multi-channel multi-contrast MRI. Magnetic Resonance Imaging, 2016, 34, 1161-1170.	1.8	19
60	Rapid multi-orientation quantitative susceptibility mapping. NeuroImage, 2016, 125, 1131-1141.	4.2	52
61	Accelerated ^{1}H MRSI using randomly undersampled spiral‐based k‐space trajectories. Magnetic Resonance in Medicine, 2015, 74, 13-24.	3.0	23
62	Wave‐CAIPI for highly accelerated 3D imaging. Magnetic Resonance in Medicine, 2015, 73, 2152-2162.	3.0	180
63	Fast reconstruction for accelerated multi-slice multi-contrast MRI. , 2015, , .		4
64	RARE/turbo spin echo imaging with simultaneous multislice Wave-CAIPI. Magnetic Resonance in Medicine, 2015, 73, 929-938.	3.0	68
65	Fast quantitative susceptibility mapping using 3D EPI and total generalized variation. NeuroImage, 2015, 111, 622-630.	4.2	157
66	Fast reconstruction for multichannel compressed sensing using a hierarchically semiseparable solver. Magnetic Resonance in Medicine, 2015, 73, 1034-1040.	3.0	14
67	Wave-CAIPI enables highly accelerated 3D MRI. , 2014, , .		1
68	Fast quantitative susceptibility mapping with L1‐regularization and automatic parameter selection. Magnetic Resonance in Medicine, 2014, 72, 1444-1459.	3.0	110
69	Quantitative oxygenation venography from MRI phase. Magnetic Resonance in Medicine, 2014, 72, 149-159.	3.0	143
70	Fast image reconstruction with L2‐regularization. Journal of Magnetic Resonance Imaging, 2014, 40, 181-191.	3.4	125
71	Lipid suppression in CSI with spatial priors and highly undersampled peripheral k‐space. Magnetic Resonance in Medicine, 2013, 69, 1501-1511.	3.0	33
72	Fast Dictionary-Based Reconstruction for Diffusion Spectrum Imaging. IEEE Transactions on Medical Imaging, 2013, 32, 2022-2033.	8.9	16

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73	Quantitative Susceptibility Map Reconstruction via a Total Generalized Variation Regularization. , 2013, , .		4
74	Accelerated diffusion spectrum imaging with compressed sensing using adaptive dictionaries. Magnetic Resonance in Medicine, 2012, 68, spcone-spcone.	3.0	4
75	Accelerated diffusion spectrum imaging with compressed sensing using adaptive dictionaries. Magnetic Resonance in Medicine, 2012, 68, 1747-1754.	3.0	66
76	MRI estimates of brain iron concentration in normal aging using quantitative susceptibility mapping. NeuroImage, 2012, 59, 2625-2635.	4.2	427
77	Multiâ€contrast reconstruction with Bayesian compressed sensing. Magnetic Resonance in Medicine, 2011, 66, 1601-1615.	3.0	109
78	Efficient integral image computation on the GPU. , 2010, , .		56
79	Fast human detection with cascaded ensembles on the GPU. , 2010, , .		27