Berkin Bilgic

List of Publications by Year
in descending order

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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	MRI estimates of brain iron concentration in normal aging using quantitative susceptibility mapping. NeuroImage, 2012, 59, 2625-2635.	4.2	427
2	Waveâ€CAIPI for highly accelerated 3D imaging. Magnetic Resonance in Medicine, 2015, 73, 2152-2162.	3.0	180
3	Fast quantitative susceptibility mapping using 3D EPI and total generalized variation. NeuroImage, 2015, 111, 622-630.	4.2	157
4	Quantitative susceptibility mapping: Report from the 2016 reconstruction challenge. Magnetic Resonance in Medicine, 2018, 79, 1661-1673.	3.0	151
5	Quantitative oxygenation venography from MRI phase. Magnetic Resonance in Medicine, 2014, 72, 149-159.	3.0	143
6	Highâ€resolution in vivo diffusion imaging of the human brain with generalized slice dithered enhanced resolution: Simultaneous multislice (g<scp>S</scp>liderâ€<scp>SMS</scp>). Magnetic Resonance in Medicine, 2018, 79, 141-151.	3.0	134
7	Fast image reconstruction with L2â€regularization. Journal of Magnetic Resonance Imaging, 2014, 40, 181-191.	3.4	125
8	Quantitative susceptibility mapping using deep neural network: QSMnet. NeuroImage, 2018, 179, 199-206.	4.2	115
9	Fast quantitative susceptibility mapping with L1â€regularization and automatic parameter selection. Magnetic Resonance in Medicine, 2014, 72, 1444-1459.	3.0	110
10	Multiâ€contrast reconstruction with Bayesian compressed sensing. Magnetic Resonance in Medicine, 2011, 66, 1601-1615.	3.0	109
11	3D MR fingerprinting with accelerated stack-of-spirals and hybrid sliding-window and GRAPPA reconstruction. NeuroImage, 2017, 162, 13-22.	4.2	87
12	Echo planar timeâ€resolved imaging (EPTI). Magnetic Resonance in Medicine, 2019, 81, 3599-3615.	3.0	75
13	RARE/turbo spin echo imaging with simultaneous multislice Wave-CAIPI. Magnetic Resonance in Medicine, 2015, 73, 929-938.	3.0	68
14	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
15	Accelerated diffusion spectrum imaging with compressed sensing using adaptive dictionaries. Magnetic Resonance in Medicine, 2012, 68, 1747-1754.	3.0	66
16	DeepDTI: High-fidelity six-direction diffusion tensor imaging using deep learning. NeuroImage, 2020, 219, 117017.	4.2	63
17	Improving parallel imaging by jointly reconstructing multiâ€contrast data. Magnetic Resonance in Medicine, 2018, 80, 619-632.	3.0	62
18	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

#	Article	IF	Citations
19	Efficient integral image computation on the GPU. , 2010, , .		56
20	Fast nonlinear susceptibility inversion with variational regularization. Magnetic Resonance in Medicine, 2018, 80, 814-821.	3.0	55
21	Waveâ€CAIPI for highly accelerated MPâ€RAGE imaging. Magnetic Resonance in Medicine, 2018, 79, 401-406.	3.0	53
22	Rapid multi-orientation quantitative susceptibility mapping. NeuroImage, 2016, 125, 1131-1141.	4.2	52
23	Singleâ€step quantitative susceptibility mapping with variational penalties. NMR in Biomedicine, 2017, 30, e3570.	2.8	50
24	Autocalibrated waveâ€<scp>CAIPI</scp> reconstruction; Joint optimization of kâ€space trajectory and parallel imaging reconstruction. Magnetic Resonance in Medicine, 2017, 78, 1093-1099.	3.0	47
25	Highlyâ€accelerated volumetric brain examination using optimized waveâ€CAIPI encoding. Journal of Magnetic Resonance Imaging, 2019, 50, 961-974.	3.4	44
26	Highly accelerated multishot echo planar imaging through synergistic machine learning and joint reconstruction. Magnetic Resonance in Medicine, 2019, 82, 1343-1358.	3.0	40
27	Nonlinear dipole inversion (NDI) enables robust quantitative susceptibility mapping (QSM). NMR in Biomedicine, 2020, 33, e4271.	2.8	39
28	Tiltedâ€CAIPI for highly accelerated distortionâ€free EPI with point spread function (PSF) encoding. Magnetic Resonance in Medicine, 2019, 81, 377-392.	3.0	37
29	Simultaneous multislice magnetic resonance fingerprinting (SMSâ€MRF) with directâ€spiral sliceâ€GRAPPA (dsâ€SG) reconstruction. Magnetic Resonance in Medicine, 2017, 77, 1966-1974.	3.0	35
30	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
31	Lipid suppression in CSI with spatial priors and highly undersampled peripheral kâ€space. Magnetic Resonance in Medicine, 2013, 69, 1501-1511.	3.0	33
32	Highâ€fidelity, highâ€isotropicâ€resolution diffusion imaging through gSlider acquisition with and T 1 corrections and integrated Î” B 0 / Rx shim array. Magnetic Resonance in Medicine, 2020, 83, 56-67.	3.0	31
33	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
34	SDnDTI: Self-supervised deep learning-based denoising for diffusion tensor MRI. NeuroImage, 2022, 253, 119033.	4.2	31
35	QSM reconstruction challenge 2.0: Design and report of results. Magnetic Resonance in Medicine, 2021, 86, 1241-1255.	3.0	30
36	Motionâ€robust subâ€millimeter isotropic diffusion imaging through motion corrected generalized slice dithered enhanced resolution (MCâ€gSlider) acquisition. Magnetic Resonance in Medicine, 2018, 80, 1891-1906.	3.0	28

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37	Joint multiâ€contrast variational network reconstruction (jVN) with application to rapid 2D and 3D imaging. Magnetic Resonance in Medicine, 2020, 84, 1456-1469.	3.0	28
38	Echo planar timeâ€resolved imaging with subspace reconstruction and optimized spatiotemporal encoding. Magnetic Resonance in Medicine, 2020, 84, 2442-2455.	3.0	28
39	Fast human detection with cascaded ensembles on the GPU. , 2010, , .		27
40	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
41	Waveâ€LORAKS: Combining wave encoding with structured lowâ€rank matrix modeling for more highly accelerated 3D imaging. Magnetic Resonance in Medicine, 2019, 81, 1620-1633.	3.0	24
42	Accelerated ¹H MRSI using randomly undersampled spiralâ€based kâ€space trajectories. Magnetic Resonance in Medicine, 2015, 74, 13-24.	3.0	23
43	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
44	Simultaneous Time Interleaved MultiSlice (STIMS) for Rapid Susceptibility Weighted acquisition. NeuroImage, 2017, 155, 577-586.	4.2	21
45	Vectorial total generalized variation for accelerated multi-channel multi-contrast MRI. Magnetic Resonance Imaging, 2016, 34, 1161-1170.	1.8	19
46	Phase-matched virtual coil reconstruction for highly accelerated diffusion echo-planar imaging. NeuroImage, 2019, 194, 291-302.	4.2	19
47	Weakâ€harmonic regularization for quantitative susceptibility mapping. Magnetic Resonance in Medicine, 2019, 81, 1399-1411.	3.0	19
48	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
49	The 2016 QSM Challenge: Lessons learned and considerations for a future challenge design. Magnetic Resonance in Medicine, 2020, 84, 1624-1637.	3.0	18
50	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
51	Improving in vivo human cerebral cortical surface reconstruction using data-driven super-resolution. Cerebral Cortex, 2021, 31, 463-482.	2.9	17
52	Fast Dictionary-Based Reconstruction for Diffusion Spectrum Imaging. IEEE Transactions on Medical Imaging, 2013, 32, 2022-2033.	8.9	16
53	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
54	Fast reconstruction for multichannel compressed sensing using a hierarchically semiseparable solver. Magnetic Resonance in Medicine, 2015, 73, 1034-1040.	3.0	14

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55	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
56	Modelâ€based iterative reconstruction for singleâ€shot <scp>EPI</scp> at 7<scp>T</scp>. Magnetic Resonance in Medicine, 2017, 78, 2250-2264.	3.0	13
57	Efficient T₂ mapping with blipâ€up/down EPI and gSliderâ€SMS (T₂â€BUDAâ€gSlider). Magnetic Resonance in Medicine, 2021, 86, 2064-2075.	3.0	13
58	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
59	Comparison of parameter optimization methods for quantitative susceptibility mapping. Magnetic Resonance in Medicine, 2021, 85, 480-494.	3.0	12
60	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
61	Improved cortical surface reconstruction using sub-millimeter resolution MPRAGE by image denoising. NeuroImage, 2021, 233, 117946.	4.2	11
62	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
63	Waveâ€CAIPI ViSTa: highly accelerated wholeâ€brain direct myelin water imaging with zeroâ€padding reconstruction. Magnetic Resonance in Medicine, 2018, 80, 1061-1073.	3.0	10
64	Accelerated wholeâ€brain perfusion imaging using a simultaneous multislice spinâ€echo and gradientâ€echo sequence with joint virtual coil reconstruction. Magnetic Resonance in Medicine, 2019, 82, 973-983.	3.0	10
65	Highly efficient MRI through multi-shot echo planar imaging. , 2019, , .		10
66	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
67	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
68	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
69	Accelerated spinâ€echo functional MRI using multisection excitation by simultaneous spinâ€echo interleaving (MESSI) with complexâ€encoded generalized slice dithered enhanced resolution (cgSlider) simultaneous multislice echoâ€planar imaging. Magnetic Resonance in Medicine, 2020, 84, 206-220.	3.0	8
70	Susceptibility-Based Neuroimaging: Standard Methods, Clinical Applications, and Future Directions. Current Radiology Reports, 2017, 5, 1.	1.4	6
71	Accelerated diffusion spectrum imaging with compressed sensing using adaptive dictionaries. Magnetic Resonance in Medicine, 2012, 68, spcone-spcone.	3.0	4
72	Quantitative Susceptibility Map Reconstruction via a Total Generalized Variation Regularization. , 2013, , .		4

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73	Fast reconstruction for accelerated multi-slice multi-contrast MRI. , 2015, , .		4
74	Optimization of magnetization transfer contrast for EPI FLAIR brain imaging. Magnetic Resonance in Medicine, 2022, 87, 2380-2387.	3.0	4
75	<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
76	Rapid simultaneous acquisition of macromolecular tissue volume, susceptibility, and relaxometry maps. Magnetic Resonance in Medicine, 2022, 87, 781-790.	3.0	3
77	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
78	Wave-CAIPI enables highly accelerated 3D MRI. , 2014, , .		1
79	Liver-Buda-Sage: Simultaneous Whole Liver T₂ and T*₂ Mapping in one Breath-Hold. , 2022, , .		1