Mehmet Akcakaya

List of Publications by Year
in descending order

100 papers	2,963 citations	186265 28 h-index	189892 50 g-index
101 all docs	101 docs citations	101 times ranked	2691 citing authors

#	Article	IF	Citations
1	Unsupervised Deep Learning Methods for Biological Image Reconstruction and Enhancement: An overview from a signal processing perspective. IEEE Signal Processing Magazine, 2022, 39, 28-44.	5.6	30
2	Artificial Intelligence for Image Enhancement and Reconstruction in Magnetic Resonance Imaging. Contemporary Medical Imaging, 2022, , 125-138.	0.4	1
3	Distributed Memory-Efficient Physics-Guided Deep Learning Reconstruction for Large-Scale 3d Non-Cartesian MRI. , 2022, , .		4
4	Residual RAKI: A hybrid linear and non-linear approach for scan-specific k-space deep learning. NeuroImage, 2022, 256, 119248.	4.2	6
5	Multiâ€mask selfâ€supervised learning for physicsâ€guided neural networks in highly accelerated magnetic resonance imaging. NMR in Biomedicine, 2022, 35, .	2.8	12
6	Diffusion Imaging in the Post HCP Era. Journal of Magnetic Resonance Imaging, 2021, 54, 36-57.	3.4	22
7	NOise reduction with DIstribution Corrected (NORDIC) PCA in dMRI with complex-valued parameter-free locally low-rank processing. NeuroImage, 2021, 226, 117539.	4.2	57
8	Improved simultaneous multislice cardiac MRI using readout concatenated kâ€space SPIRiT (ROCKâ€SPIRiT). Magnetic Resonance in Medicine, 2021, 85, 3036-3048.	3.0	10
9	Freeâ€breathing simultaneous <i>T</i>₁, <i>T</i>₂, and <i>T</i>₂^{âˆ—} quantification in the myocardium. Magnetic Resonance in Medicine, 2021, 86, 1226-1240.	3.0	11
10	Self-Supervised Physics-Guided Deep Learning Reconstruction for High-Resolution 3D LGE CMR. , 2021, , .		10
11	Ground-Truth Free Multi-Mask Self-Supervised Physics-Guided Deep Learning in Highly Accelerated MRI. , 2021, , .		8
12	Improved Supervised Training of Physics-Guided Deep Learning Image Reconstruction with Multi-Masking. , 2021, , .		2
13	Lowering the thermal noise barrier in functional brain mapping with magnetic resonance imaging. Nature Communications, 2021, 12, 5181.	12.8	68
14	Instabilities in Conventional Multi-Coil MRI Reconstruction with Small Adversarial Perturbations. , 2021, , .		3
15	Efficient Training of 3D Unrolled Neural Networks for MRI Reconstruction Using Small Databases. , 2021, , .		1
16	Improved Simultaneous Multi-Slice Functional MRI Using Self-supervised Deep Learning. , 2021, , .		6
17	20-fold Accelerated 7T fMRI Using Referenceless Self-Supervised Deep Learning Reconstruction. , 2021, 2021, 3765-3769.		10
18	Compressed Sensing MRI with â„“₁-Wavelet Reconstruction Revisited Using Modern Data Science Tools. , 2021, 2021, 3596-3600.		2

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19	Low-Rank Tensor Models for Improved Multidimensional MRI: Application to Dynamic Cardiac T_1 Mapping. IEEE Transactions on Computational Imaging, 2020, 6, 194-207.	4.4	27
20	Selfâ€calibrated interpolation of nonâ€Cartesian data with GRAPPA in parallel imaging. Magnetic Resonance in Medicine, 2020, 83, 1837-1850.	3.0	3
21	Tensor Completion From Regular Sub-Nyquist Samples. IEEE Transactions on Signal Processing, 2020, 68, 1-16.	5.3	37
22	High-Fidelity Accelerated MRI Reconstruction by Scan-Specific Fine-Tuning of Physics-Based Neural Networks. , 2020, 2020, 1481-1484.		4
23	Dense Recurrent Neural Networks for Accelerated MRI: History-Cognizant Unrolling of Optimization Algorithms. IEEE Journal on Selected Topics in Signal Processing, 2020, 14, 1280-1291.	10.8	51
24	Scan-Specific Accelerated Mri Reconstruction Using Recurrent Neural Networks In A Regularized Self-Consistent Framework. , 2020, , .		0
25	Self-Supervised Physics-Based Deep Learning MRI Reconstruction Without Fully-Sampled Data. , 2020, , .		39
26	Improved Simultaneous Multi-Slice Imaging for Perfusion Cardiac MRI Using Outer Volume Suppression and Regularized Reconstruction. , 2020, , .		4
27	Cardiac Magnetic Resonance Feature Tracking Global Longitudinal Strain and Prognosis After Heart Transplantation. JACC: Cardiovascular Imaging, 2020, 13, 1934-1942.	5.3	18
28	Towards measuring the effect of flow in blood <i>T</i> ₁ assessed in a flow phantom and <i>in vivo</i>. Physics in Medicine and Biology, 2020, 65, 095001.	3.0	3
29	Selfâ€supervised learning of physicsâ€guided reconstruction neural networks without fully sampled reference data. Magnetic Resonance in Medicine, 2020, 84, 3172-3191.	3.0	133
30	A field-monitoring-based approach for correcting eddy-current-induced artifacts of up to the 2nd spatial order in human-connectome-project-style multiband diffusion MRI experiment at 7T: A pilot study. NeuroImage, 2020, 216, 116861.	4.2	13
31	Accelerated coronary MRI with sRAKI: A database-free self-consistent neural network k-space reconstruction for arbitrary undersampling. PLoS ONE, 2020, 15, e0229418.	2.5	25
32	Selfâ€navigation for 3D multishot EPI with dataâ€reference. Magnetic Resonance in Medicine, 2020, 84, 1747-1762.	3.0	16
33	Deep-Learning Methods for Parallel Magnetic Resonance Imaging Reconstruction: A Survey of the Current Approaches, Trends, and Issues. IEEE Signal Processing Magazine, 2020, 37, 128-140.	5.6	213
34	Right Ventricular Abnormalities on Cardiovascular Magnetic Resonance Imaging in Patients With Sarcoidosis. JACC: Cardiovascular Imaging, 2020, 13, 1395-1405.	5.3	50
35	Automated Acquisition Planning for Magnetic Resonance Spectroscopy in Brain Cancer. Lecture Notes in Computer Science, 2020, 12267, 730-739.	1.3	0
36	Accelerated Coronary Mri Using 3D Spirit-Raki With Sparsity Regularization. , 2019, 2019, 1692-1695.		13

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37	Robust Online Spike Recovery for High-Density Electrode Recordings using Convolutional Compressed Sensing. , 2019, , .		0
38	Myocardial Fibrosis and Prognosis in Heart Transplant Recipients. Circulation: Cardiovascular Imaging, 2019, 12, e009060.	2.6	24
39	Long-Term Embolic Outcomes After Detection of Left Ventricular Thrombus by Late Gadolinium Enhancement Cardiovascular Magnetic Resonance Imaging. Circulation: Cardiovascular Imaging, 2019, 12, e009723.	2.6	48
40	Assessment of the 2017 AHA/ACC/HRS Guideline Recommendations for Implantable Cardioverter-Defibrillator Implantation in Cardiac Sarcoidosis. Circulation: Arrhythmia and Electrophysiology, 2019, 12, e007488.	4.8	66
41	Safety and prognostic value of regadenoson stress cardiovascular magnetic resonance imaging in heart transplant recipients. Journal of Cardiovascular Magnetic Resonance, 2019, 21, 9.	3.3	28
42	Scan-Specific Residual Convolutional Neural Networks for Fast MRI Using Residual RAKI. , 2019, , .		6
43	Functional LGE Imaging: Cardiac Phase-Resolved Assessment of Focal Fibrosis. , 2019, 2019, 3999-4003.		0
44	Improved Regularized Reconstruction for Simultaneous Multi-Slice Cardiac MRI T₁ Mapping. , 2019, 2019, .		6
45	Optimized fast GPU implementation of robust artificial-neural-networks for k-space interpolation (RAKI) reconstruction. PLoS ONE, 2019, 14, e0223315.	2.5	6
46	Comparison of Neural Network Architectures for Physics-Driven Deep Learning MRI Reconstruction. , 2019, , .		3
47	Scanâ€specific robust artificialâ€neuralâ€networks for kâ€space interpolation (RAKI) reconstruction: Databaseâ€free deep learning for fast imaging. Magnetic Resonance in Medicine, 2019, 81, 439-453.	3.0	253
48	sRAKI-RNN: accelerated MRI with scan-specific recurrent neural networks using densely connected blocks. , 2019, , .		8
49	Magnetic Resonance Imaging of Coronary Arteries. , 2019, , 291-299.e5.		0
50	Time efficient whole-brain coverage with MR Fingerprinting using slice-interleaved echo-planar-imaging. Scientific Reports, 2018, 8, 6667.	3.3	29
51	Sparse Phase Retrieval via Truncated Amplitude Flow. IEEE Transactions on Signal Processing, 2018, 66, 479-491.	5.3	82
52	Accelerated Simultaneous Multi-Slice MRI using Subject-Specific Convolutional Neural Networks. , 2018, 2018, 1636-1640.		6
53	Fast GPU Implementation of a Scan-Specific Deep Learning Reconstruction for Accelerated Magnetic Resonance Imaging. , 2018, 2018, 399-403.		3
54	Subject-Specific Convolutional Neural Networks for Accelerated Magnetic Resonance Imaging. , 2018, 2018, .		1

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55	Impact of Cardiovascular Magnetic Resonance Imaging on Identifying the Etiology of Cardiomyopathy in Patients Undergoing Cardiac Transplantation. Scientific Reports, 2018, 8, 16212.	3.3	13
56	Electromagnetic Brain Source Imaging by Means of a Robust Minimum Variance Beamformer. IEEE Transactions on Biomedical Engineering, 2018, 65, 2365-2374.	4.2	12
57	Temporally resolved parametric assessment of Zâ€magnetization recovery (TOPAZ): Dynamic myocardial T₁ mapping using a cine steadyâ€state lookâ€locker approach. Magnetic Resonance in Medicine, 2018, 79, 2087-2100.	3.0	24
58	Black-blood native T₁ mapping: Blood signal suppression for reduced partial voluming in the myocardium. Magnetic Resonance in Medicine, 2017, 78, 484-493.	3.0	12
59	Clinical performance of highâ€resolution late gadolinium enhancement imaging with compressed sensing. Journal of Magnetic Resonance Imaging, 2017, 46, 1829-1838.	3.4	47
60	Simultaneous multislice imaging for native myocardial T₁ mapping: Improved spatial coverage in a single breath-hold. Magnetic Resonance in Medicine, 2017, 78, 462-471.	3.0	32
61	Motion-robust cardiac B1+ mapping at 3T using interleaved bloch-siegert shifts. Magnetic Resonance in Medicine, 2017, 78, 670-677.	3.0	11
62	Multi-scale locally low-rank noise reduction for high-resolution dynamic quantitative cardiac MRI. , 2017, 2017, 1473-1476.		11
63	Locally Low-Rank tensor regularization for high-resolution quantitative dynamic MRI. , 2017, 2017, .		11
64	Joint myocardial T₁ and T₂ mapping using a combination of saturation recovery and T₂â€preparation. Magnetic Resonance in Medicine, 2016, 76, 888-896.	3.0	57
65	Accelerated threeâ€dimensional cine phase contrast imaging using randomly undersampled echo planar imaging with compressed sensing reconstruction. NMR in Biomedicine, 2015, 28, 30-39.	2.8	14
66	Impact of motion correction on reproducibility and spatial variability of quantitative myocardial T2 mapping. Journal of Cardiovascular Magnetic Resonance, 2015, 17, 46.	3.3	21
67	Accelerated cardiac MR stress perfusion with radial sampling after physical exercise with an MRâ€compatible supine bicycle ergometer. Magnetic Resonance in Medicine, 2015, 74, 384-395.	3.0	20
68	Freeâ€breathing postâ€contrast threeâ€dimensional T₁ mapping: Volumetric assessment of myocardial T₁ values. Magnetic Resonance in Medicine, 2015, 73, 214-222.	3.0	35
69	Freeâ€breathing multislice native myocardial T₁ mapping using the sliceâ€interleaved T₁ (STONE) sequence. Magnetic Resonance in Medicine, 2015, 74, 115-124.	3.0	83
70	Whole Heart Coronary Imaging with Flexible Acquisition Window and Trigger Delay. PLoS ONE, 2015, 10, e0112020.	2.5	7
71	Improved quantitative myocardial T₂ mapping: Impact of the fitting model. Magnetic Resonance in Medicine, 2015, 74, 93-105.	3.0	57
72	Freeâ€breathing combined threeâ€dimensional phase sensitive late gadolinium enhancement and T₁ mapping for myocardial tissue characterization. Magnetic Resonance in Medicine, 2015, 74, 1032-1041.	3.0	27

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73	Sparse Signal Recovery from a Mixture of Linear and Magnitude-Only Measurements. IEEE Signal Processing Letters, 2015, 22, 1220-1223.	3.6	10
74	Magnetic Resonance Imaging of Coronary Arteries. , 2015, , 245-260.		0
75	On the selection of sampling points for myocardial T₁ mapping. Magnetic Resonance in Medicine, 2015, 73, 1741-1753.	3.0	31
76	Combined saturation/inversion recovery sequences for improved evaluation of scar and diffuse fibrosis in patients with arrhythmia or heart rate variability. Magnetic Resonance in Medicine, 2014, 71, 1024-1034.	3.0	149
77	Freeâ€breathing phase contrast MRI with near 100% respiratory navigator efficiency using kâ€spaceâ€dependent respiratory gating. Magnetic Resonance in Medicine, 2014, 71, 2172-2179.	3.0	13
78	3D late gadolinium enhancement in a single prolonged breathâ€hold using supplemental oxygenation and hyperventilation. Magnetic Resonance in Medicine, 2014, 72, 850-857.	3.0	14
79	Localized spatioâ€temporal constraints for accelerated CMR perfusion. Magnetic Resonance in Medicine, 2014, 72, 629-639.	3.0	16
80	Accelerated free breathing ECG triggered contrast enhanced pulmonary vein magnetic resonance angiography using compressed sensing. Journal of Cardiovascular Magnetic Resonance, 2014, 16, 91.	3.3	15
81	Compressed sensing reconstruction for undersampled breathâ€hold radial cine imaging with auxiliary freeâ€breathing data. Journal of Magnetic Resonance Imaging, 2014, 39, 179-188.	3.4	10
82	Accelerated isotropic subâ€millimeter wholeâ€heart coronary MRI: Compressed sensing versus parallel imaging. Magnetic Resonance in Medicine, 2014, 71, 815-822.	3.0	64
83	An Augmented Lagrangian Based Compressed Sensing Reconstruction for Non-Cartesian Magnetic Resonance Imaging without Gridding and Regridding at Every Iteration. PLoS ONE, 2014, 9, e107107.	2.5	4
84	Compressed sensing reconstruction for wholeâ€heart imaging with 3D radial trajectories: A graphics processing unit implementation. Magnetic Resonance in Medicine, 2013, 69, 91-102.	3.0	62
85	Distortion-based achievability conditions for joint estimation of sparse signals and measurement parameters from undersampled acquisitions. , 2013, , .		0
86	Accelerated aortic flow assessment with compressed sensing with and without use of the sparsity of the complex difference image. Magnetic Resonance in Medicine, 2013, 70, 851-858.	3.0	38
87	Utility of respiratoryâ€navigatorâ€rejected kâ€space lines for improved signalâ€toâ€noise ratio in threeâ€dimensional cardiac MR. Magnetic Resonance in Medicine, 2013, 70, 1332-1339.	3.0	2
88	Accelerated Late Gadolinium Enhancement Cardiac MR Imaging with Isotropic Spatial Resolution Using Compressed Sensing: Initial Experience. Radiology, 2012, 264, 691-699.	7.3	75
89	Accelerated contrastâ€enhanced wholeâ€heart coronary MRI using lowâ€dimensionalâ€structure selfâ€learning and thresholding. Magnetic Resonance in Medicine, 2012, 67, 1434-1443.	3.0	29
90	Compressed Sensing With Wavelet Domain Dependencies for Coronary MRI: A Retrospective Study. IEEE Transactions on Medical Imaging, 2011, 30, 1090-1099.	8.9	43

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91	Accelerated noncontrastâ€enhanced pulmonary vein MRA with distributed compressed sensing. Journal of Magnetic Resonance Imaging, 2011, 33, 1248-1255.	3.4	24
92	Lowâ€dimensionalâ€structure selfâ€learning and thresholding: Regularization beyond compressed sensing for MRI Reconstruction. Magnetic Resonance in Medicine, 2011, 66, 756-767.	3.0	120
93	Compressedâ€sensing motion compensation (CosMo): A joint prospectiveâ€"retrospective respiratory navigator for coronary MRI. Magnetic Resonance in Medicine, 2011, 66, 1674-1681.	3.0	22
94	A Coding Theory Approach to Noisy Compressive Sensing Using Low Density Frames. IEEE Transactions on Signal Processing, 2011, 59, 5369-5379.	5.3	18
95	Shannon-Theoretic Limits on Noisy Compressive Sampling. IEEE Transactions on Information Theory, 2010, 56, 492-504.	2.4	142
96	Low density frames for compressive sensing. , 2010, , .		5
97	A Frame Construction and a Universal Distortion Bound for Sparse Representations. IEEE Transactions on Signal Processing, 2008, 56, 2443-2450.	5.3	72
98	Noisy compressive sampling limits in linear and sublinear regimes. , 2008, , .		3
99	Performance of Sparse Representation Algorithms Using Randomly Generated Frames. IEEE Signal Processing Letters, 2007, 14, 777-780.	3.6	4
100	Performance Study of Various Sparse Representation Methods Using Redundant Frames. , 2007, , .		1