

Lei Zhu

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

71
papers

2,074
citations

24
h-index

44
g-index

81
ext. papers

2,408
ext. citations

4.5
avg, IF

5.08
L-index

#	Paper	IF	Citations
71	Faster STORM using compressed sensing. <i>Nature Methods</i> , 2012 , 9, 721-3	21.6	370
70	Compressed sensing based cone-beam computed tomography reconstruction with a first-order method. <i>Medical Physics</i> , 2010 , 37, 5113-25	4.4	179
69	Scatter correction method for X-ray CT using primary modulation: theory and preliminary results. <i>IEEE Transactions on Medical Imaging</i> , 2006 , 25, 1573-87	11.7	153
68	Scatter correction for cone-beam CT in radiation therapy. <i>Medical Physics</i> , 2009 , 36, 2258-68	4.4	125
67	Shading correction for on-board cone-beam CT in radiation therapy using planning MDCT images. <i>Medical Physics</i> , 2010 , 37, 5395-406	4.4	85
66	Noise suppression in scatter correction for cone-beam CT. <i>Medical Physics</i> , 2009 , 36, 741-52	4.4	83
65	Iterative image-domain decomposition for dual-energy CT. <i>Medical Physics</i> , 2014 , 41, 041901	4.4	79
64	Scatter correction for full-fan volumetric CT using a stationary beam blocker in a single full scan. <i>Medical Physics</i> , 2011 , 38, 6027-38	4.4	78
63	Accelerated barrier optimization compressed sensing (ABOCS) reconstruction for cone-beam CT: phantom studies. <i>Medical Physics</i> , 2012 , 39, 4588-98	4.4	68
62	Scatter correction method for x-ray CT using primary modulation: phantom studies. <i>Medical Physics</i> , 2010 , 37, 934-46	4.4	56
61	Quantitative cone-beam CT imaging in radiation therapy using planning CT as a prior: first patient studies. <i>Medical Physics</i> , 2012 , 39, 1991-2000	4.4	56
60	Combined iterative reconstruction and image-domain decomposition for dual energy CT using total-variation regularization. <i>Medical Physics</i> , 2014 , 41, 051909	4.4	44
59	Using total-variation regularization for intensity modulated radiation therapy inverse planning with field-specific numbers of segments. <i>Physics in Medicine and Biology</i> , 2008 , 53, 6653-72	3.8	44
58	X-ray scatter correction for cone-beam CT using moving blocker array 2005 ,		40
57	Search for IMRT inverse plans with piecewise constant fluence maps using compressed sensing techniques. <i>Medical Physics</i> , 2009 , 36, 1895-905	4.4	34
56	Overview of X-ray Scatter in Cone-beam Computed Tomography and Its Correction Methods. <i>Current Medical Imaging</i> , 2010 , 6, 82-89	1.2	29
55	Noise suppression for dual-energy CT via penalized weighted least-square optimization with similarity-based regularization. <i>Medical Physics</i> , 2016 , 43, 2676	4.4	29

54	Emission guided radiation therapy for lung and prostate cancers: a feasibility study on a digital patient. <i>Medical Physics</i> , 2012 , 39, 7140-52	4.4	28
53	Modulator design for x-ray scatter correction using primary modulation: material selection. <i>Medical Physics</i> , 2010 , 37, 4029-37	4.4	27
52	Joint CT/CBCT deformable registration and CBCT enhancement for cancer radiotherapy. <i>Medical Image Analysis</i> , 2013 , 17, 387-400	15.4	26
51	Metal artifact correction for x-ray computed tomography using kV and selective MV imaging. <i>Medical Physics</i> , 2014 , 41, 121910	4.4	25
50	Accelerated barrier optimization compressed sensing (ABOCS) for CT reconstruction with improved convergence. <i>Physics in Medicine and Biology</i> , 2014 , 59, 1801-14	3.8	24
49	Inverse planning for IMRT with nonuniform beam profiles using total-variation regularization (TVR). <i>Medical Physics</i> , 2011 , 38, 57-66	4.4	24
48	Library based x-ray scatter correction for dedicated cone beam breast CT. <i>Medical Physics</i> , 2016 , 43, 4529-4	4.4	24
47	Low-dose and scatter-free cone-beam CT imaging using a stationary beam blocker in a single scan: phantom studies. <i>Computational and Mathematical Methods in Medicine</i> , 2013 , 2013, 637614	2.8	21
46	Three-dimensional anisotropic adaptive filtering of projection data for noise reduction in cone beam CT. <i>Medical Physics</i> , 2011 , 38, 5896-909	4.4	20
45	Noise Suppression for Dual-Energy CT Through Entropy Minimization. <i>IEEE Transactions on Medical Imaging</i> , 2015 , 34, 2286-97	11.7	19
44	Relationship between x-ray illumination field size and flat field intensity and its impacts on x-ray imaging. <i>Medical Physics</i> , 2012 , 39, 5901-9	4.4	19
43	Dual energy CT with one full scan and a second sparse-view scan using structure preserving iterative reconstruction (SPIR). <i>Physics in Medicine and Biology</i> , 2016 , 61, 6684-6706	3.8	18
42	A general framework of noise suppression in material decomposition for dual-energy CT. <i>Medical Physics</i> , 2015 , 42, 4848-62	4.4	17
41	Noise reduction in low-dose x-ray fluoroscopy for image-guided radiation therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2009 , 74, 637-43	4	17
40	X-ray scatter correction for dedicated cone beam breast CT using a forward-projection model. <i>Medical Physics</i> , 2017 , 44, 2312-2320	4.4	16
39	A practical reconstruction algorithm for CT noise variance maps using FBP reconstruction 2007 ,		16
38	Single-Scan Dual-Energy CT Using Primary Modulation. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 1799-1808	11.7	15
37	Toward truly optimal IMRT dose distribution: inverse planning with voxel-specific penalty. <i>Technology in Cancer Research and Treatment</i> , 2010 , 9, 629-36	2.7	13

36	Local filtration based scatter correction for cone-beam CT using primary modulation. <i>Medical Physics</i> , 2016 , 43, 6199	4.4	13
35	Toward a planning scheme for emission guided radiation therapy (EGRT): FDG based tumor tracking in a metastatic breast cancer patient. <i>Medical Physics</i> , 2013 , 40, 081708	4.4	10
34	Improved scatter correction for x-ray conebeam CT using primary modulation 2007 ,		10
33	Optimization of system parameters for modulator design in x-ray scatter correction using primary modulation 2010 ,		9
32	The role of off-focus radiation in scatter correction for dedicated cone beam breast CT. <i>Medical Physics</i> , 2018 , 45, 191-201	4.4	9
31	Fast shading correction for cone beam CT in radiation therapy via sparse sampling on planning CT. <i>Medical Physics</i> , 2017 , 44, 1796-1808	4.4	8
30	A patient set-up protocol based on partially blocked cone-beam CT. <i>Technology in Cancer Research and Treatment</i> , 2010 , 9, 191-8	2.7	8
29	A novel method for film thickness measurement of perfluoropolyether lubricant by secondary ion mass spectroscopy. <i>Applied Surface Science</i> , 2002 , 189, 53-58	6.7	8
28	Image-domain shading correction for cone-beam CT without prior patient information. <i>Journal of Applied Clinical Medical Physics</i> , 2015 , 16, 65-75	2.3	7
27	Iterative CT reconstruction via minimizing adaptively reweighted total variation. <i>Journal of X-Ray Science and Technology</i> , 2014 , 22, 227-40	2.1	7
26	Scatter correction for x-ray conebeam CT using one-dimensional primary modulation 2009 ,		6
25	A short-scan reconstruction for cone-beam CT using shift-invariant FBP and equal weighting. <i>Medical Physics</i> , 2007 , 34, 4422-38	4.4	6
24	Total-variation regularization based inverse planning for intensity modulated arc therapy. <i>Technology in Cancer Research and Treatment</i> , 2012 , 11, 149-62	2.7	5
23	Pixel-wise estimation of noise statistics on iterative CT reconstruction from a single scan. <i>Medical Physics</i> , 2017 , 44, 3525-3533	4.4	4
22	Image-domain non-uniformity correction for cone-beam CT 2017 ,		4
21	Direct measurement of bonded film thickness of A20H lubricant. <i>Applied Physics A: Materials Science and Processing</i> , 2009 , 95, 833-841	2.6	4
20	Fast shading correction for cone-beam CT via partitioned tissue classification. <i>Physics in Medicine and Biology</i> , 2019 , 64, 065015	3.8	3
19	Noise suppression for energy-resolved CT using similarity-based non-local filtration 2016 ,		3

18	Single-scan energy-selective imaging on cone-beam CT: a preliminary study 2013 ,		3
17	MTF measurement and a phantom study for scatter correction in CBCT using primary modulation 2006 ,		3
16	Comparison of three undersampling approaches in computed tomography reconstruction. <i>Quantitative Imaging in Medicine and Surgery</i> , 2019 , 9, 1229-1241	3.6	2
15	Library-based scatter correction for dedicated cone beam breast CT: a feasibility study 2016 ,		2
14	Virtual scatter modulation for X-ray CT scatter correction using primary modulator. <i>Journal of X-Ray Science and Technology</i> , 2017 , 25, 869-885	2.1	2
13	Single-scan scatter correction for cone-beam CT using a stationary beam blocker: a preliminary study 2011 ,		2
12	Evaluation of an erbium modulator in x-ray scatter correction using primary modulation 2011 ,		2
11	Low-dose and scatter-free cone-beam CT imaging: a preliminary study 2012 ,		2
10	Measurement-based scatter correction for cone-beam CT in radiation therapy 2009 ,		2
9	Jitter correction for transmission X-ray microscopy via measurement of geometric moments. <i>Journal of Synchrotron Radiation</i> , 2019 , 26, 1808-1814	2.4	2
8	Noise reduction for Multi-Harmonic Phase Analysis of gated SPECT myocardial perfusion imaging 2010 ,		1
7	Simulation of left ventricular dyssynchrony using the XCAT phantom 2010 ,		1
6	Accelerated barrier optimization compressed sensing (ABOCS) reconstruction: Performance evaluation for cone-beam CT 2012 ,		1
5	Low-dose quantitative cone-beam CT imaging in radiation therapy 2012 ,		1
4	Fast and effective single-scan dual-energy cone-beam CT reconstruction and decomposition denoising based on dual-energy vectorization. <i>Medical Physics</i> , 2021 , 48, 4843-4856	4.4	1
3	Planning CT-guided robust and fast cone-beam CT scatter correction using a local filtration technique. <i>Medical Physics</i> , 2021 , 48, 6832-6843	4.4	0
2	Comparison of the Dosimetric Influence of Applicator Displacement on 2D and 3D Brachytherapy for Cervical Cancer Treatment. <i>Technology in Cancer Research and Treatment</i> , 2021 , 20, 15330338211041201	2.7	0
1	In situ measurement of the bonded film thickness of Z-Tetraol lubricant on magnetic recording media. <i>Journal of Applied Physics</i> , 2010 , 108, 084907	2.5	

