

Xiaochuan Pan

List of Publications by Year in Descending Order

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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.

141
papers

4,397
citations

29
h-index

64
g-index

224
ext. papers

5,405
ext. citations

3.9
avg, IF

5.78
L-index

#	Paper	IF	Citations
141	Directional-TV algorithm for image reconstruction from limited-angular-range data. <i>Medical Image Analysis</i> , 2021 , 70, 102030	15.4	5
140	A signal detection model for quantifying overregularization in nonlinear image reconstruction. <i>Medical Physics</i> , 2021 , 48, 6312-6323	4.4	0
139	Non-convex primal-dual algorithm for image reconstruction in spectral CT. <i>Computerized Medical Imaging and Graphics</i> , 2021 , 87, 101821	7.6	5
138	Do CNNs Solve the CT Inverse Problem?. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 1799-1810	10.0	12
137	High-Resolution Full-3D Specimen Imaging for Lumpectomy Margin Assessment in Breast Cancer. <i>Annals of Surgical Oncology</i> , 2021 , 28, 5513-5524	3.1	3
136	ASO Visual Abstract: High-Resolution Full 3D Specimen Imaging for Lumpectomy Margin Assessment in Breast Cancer. <i>Annals of Surgical Oncology</i> , 2021 , 28, 626-627	3.1	
135	Dual-energy CT imaging with limited-angular-range data. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	2
134	Dual-energy CT imaging over non-overlapping, orthogonal arcs of limited-angular ranges. <i>Journal of X-Ray Science and Technology</i> , 2021 , 29, 975-985	2.1	2
133	Optimization-based algorithm for solving the discrete x-ray transform with nonlinear partial volume effect. <i>Journal of Medical Imaging</i> , 2020 , 7, 053502	2.6	1
132	Imaging of fiber-like structures in digital breast tomosynthesis. <i>Journal of Medical Imaging</i> , 2019 , 6, 031404	4.0	4
131	Preliminary investigation of optimization-based image reconstruction for TOF PET with sparse configurations 2019 ,		5
130	Optimization-based reconstruction for correcting non-linear partial volume artifacts in CT 2019 ,		1
129	A preliminary study on explicit compensation for the non-linear-partial-volume effect in CT 2019 ,		1
128	Collision-avoiding imaging trajectories for linac mounted cone-beam CT. <i>Journal of X-Ray Science and Technology</i> , 2019 , 27, 1-16	2.1	5
127	Estimating the spectrum in computed tomography via Kullback-Leibler divergence constrained optimization. <i>Medical Physics</i> , 2019 , 46, 81-92	4.4	12
126	Algorithm-enabled partial-angular-scan configurations for dual-energy CT. <i>Medical Physics</i> , 2018 , 45, 1857-1870	4.4	13
125	Optimization-Based Image Reconstruction From Low-Count, List-Mode TOF-PET Data. <i>IEEE Transactions on Biomedical Engineering</i> , 2018 , 65, 936-946	5	6

124	Alternating Minimization Based Framework for Simultaneous Spectral Calibration and Image Reconstruction in Spectral CT 2018 ,		1
123	Reduction of Angularly-Varying-Data Truncation in C-Arm CBCT Imaging. <i>Sensing and Imaging</i> , 2018 , 19, 1	1.4	1
122	Optimization-based image reconstruction from sparsely sampled data in electron paramagnetic resonance imaging. <i>Journal of Magnetic Resonance</i> , 2018 , 294, 24-34	3	7
121	The Non-prewhitening and Hotelling Observers for Parameter Selection for Linear Iterative Image Reconstruction in Breast Tomosynthesis 2017 ,		1
120	Image reconstruction and scan configurations enabled by optimization-based algorithms in multispectral CT. <i>Physics in Medicine and Biology</i> , 2017 , 62, 8763-8793	3.8	34
119	Investigating simulation-based metrics for characterizing linear iterative reconstruction in digital breast tomosynthesis. <i>Medical Physics</i> , 2017 , 44, e279-e296	4.4	8
118	Optimization-based image reconstruction with artifact reduction in C-arm CBCT. <i>Physics in Medicine and Biology</i> , 2016 , 61, 7300-7333	3.8	22
117	TV constrained CT image reconstruction with discretized natural pixels 2016 ,		1
116	Use of the Hotelling observer to optimize image reconstruction in digital breast tomosynthesis. <i>Journal of Medical Imaging</i> , 2016 , 3, 011008	2.6	3
115	Reconstructing dynamic magnification CBCT scans with optimization-based reconstruction 2016 ,		1
114	An algorithm for constrained one-step inversion of spectral CT data. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3784-818	3.8	83
113	Dynamic intensity-weighted region of interest imaging for conebeam CT. <i>Journal of X-Ray Science and Technology</i> , 2016 , 24, 361-77	2.1	2
112	Investigation of optimization-based reconstruction with an image-total-variation constraint in PET. <i>Physics in Medicine and Biology</i> , 2016 , 61, 6055-84	3.8	26
111	Artifact reduction in short-scan CBCT by use of optimization-based reconstruction. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3387-406	3.8	30
110	Algorithm-enabled exploration of image-quality potential of cone-beam CT in image-guided radiation therapy. <i>Physics in Medicine and Biology</i> , 2015 , 60, 4601-33	3.8	18
109	TV-constrained incremental algorithms for low-intensity CT image reconstruction 2015 ,		2
108	An investigation of regularization for basis image reconstruction in spectral CT 2015 ,		2
107	Noise properties of CT images reconstructed by use of constrained total-variation, data-discrepancy minimization. <i>Medical Physics</i> , 2015 , 42, 2690-8	4.4	16

106	EMPIRICAL AVERAGE-CASE RELATION BETWEEN UNDERSAMPLING AND SPARSITY IN X-RAY CT. <i>Inverse Problems and Imaging</i> , 2015 , 9, 431-446	2.1	14
105	Investigation of iterative image reconstruction in low-dose breast CT. <i>Physics in Medicine and Biology</i> , 2014 , 59, 2659-85	3.8	40
104	Task-based optimization of dedicated breast CT via Hotelling observer metrics. <i>Medical Physics</i> , 2014 , 41, 101917	4.4	15
103	Basis-image reconstruction directly from sparse-view data in spectral CT 2014 ,		1
102	Analysis of iterative region-of-interest image reconstruction for x-ray computed tomography. <i>Journal of Medical Imaging</i> , 2014 , 1, 031007	2.6	23
101	Region of interest based Hotelling observer for computed tomography with comparison to alternative methods. <i>Journal of Medical Imaging</i> , 2014 , 1, 031010	2.6	3
100	Constrained TV-minimization image reconstruction for industrial CT system 2014 ,		2
99	X-ray tomography system to investigate granular materials during mechanical loading. <i>Review of Scientific Instruments</i> , 2014 , 85, 083708	1.7	9
98	Constrained TV Minimization for Enhanced Exploitation of Gradient Sparsity: Application to CT Image Reconstruction. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2014 , 2,	3	54
97	Quantifying admissible undersampling for sparsity-exploiting iterative image reconstruction in X-ray CT. <i>IEEE Transactions on Medical Imaging</i> , 2013 , 32, 460-73	11.7	91
96	Optimization-based image reconstruction from sparse-view data in offset-detector CBCT. <i>Physics in Medicine and Biology</i> , 2013 , 58, 205-30	3.8	45
95	First-order convex feasibility algorithms for x-ray CT. <i>Medical Physics</i> , 2013 , 40, 031115	4.4	19
94	Optimization-based reconstruction of sparse images from few-view projections. <i>Physics in Medicine and Biology</i> , 2012 , 57, 5245-73	3.8	80
93	Convex optimization problem prototyping for image reconstruction in computed tomography with the Chambolle-Pock algorithm. <i>Physics in Medicine and Biology</i> , 2012 , 57, 3065-91	3.8	192
92	Convergence of iterative image reconstruction algorithms for Digital Breast Tomosynthesis 2012 ,		1
91	Algorithm-enabled low-dose micro-CT imaging. <i>IEEE Transactions on Medical Imaging</i> , 2011 , 30, 606-20	11.7	94
90	A constrained, total-variation minimization algorithm for low-intensity x-ray CT. <i>Medical Physics</i> , 2011 , 38 Suppl 1, S117	4.4	66
89	Initial experience in image reconstruction from limited-angle C-arm CBCT data 2011 ,		1

88	Iterative image reconstruction with variable resolution in CT 2011 ,		2
87	Ensuring convergence in total-variation-based reconstruction for accurate microcalcification imaging in breast X-ray CT 2011 ,		2
86	Optimizing algorithm parameters based on a model observer detection task for image reconstruction in digital breast tomosynthesis 2011 ,		4
85	Frequency extrapolation by nonconvex compressive sensing 2011 ,		5
84	Non-circular cone beam CT trajectories: A preliminary investigation on a clinical scanner 2010 ,		4
83	Image reconstruction exploiting object sparsity in boundary-enhanced X-ray phase-contrast tomography. <i>Optics Express</i> , 2010 , 18, 10404-22	3.3	40
82	Region of interest reconstruction in x-ray fluorescence computed tomography for negligible attenuation. <i>IEEE Transactions on Nuclear Science</i> , 2010 , 57, 234-241	1.7	3
81	A BPF-FBP tandem algorithm for image reconstruction in reverse helical cone-beam CT. <i>Medical Physics</i> , 2010 , 37, 32-9	4.4	9
80	Backprojection-filtration reconstruction without invoking a spatially varying weighting factor. <i>Medical Physics</i> , 2010 , 37, 1201-9	4.4	2
79	Evaluation of sparse-view reconstruction from flat-panel-detector cone-beam CT. <i>Physics in Medicine and Biology</i> , 2010 , 55, 6575-99	3.8	245
78	Region of Interest Imaging for a General Trajectory with the Rebinned BPF Algorithm. <i>Tsinghua Science and Technology</i> , 2010 , 15, 68-73	3.4	2
77	Investigation of Sparse Data Mouse Imaging Using Micro-CT with a Carbon-Nanotube-Based X-ray Source. <i>Tsinghua Science and Technology</i> , 2010 , 15, 74-78	3.4	7
76	Region-of-interest image reconstruction with intensity weighting in circular cone-beam CT for image-guided radiation therapy. <i>Medical Physics</i> , 2009 , 36, 1184-92	4.4	29
75	Image reconstruction in reduced circular sinusoidal cone-beam CT. <i>Journal of X-Ray Science and Technology</i> , 2009 , 17, 189-205	2.1	5
74	Why do commercial CT scanners still employ traditional, filtered back-projection for image reconstruction?. <i>Inverse Problems</i> , 2009 , 25, 1230009	2.3	319
73	Boundary-enhanced region-of-interest image reconstruction in propagation-based x-ray phase-contrast tomography. <i>Applied Physics Letters</i> , 2009 , 95, 244101	3.4	1
72	Enhanced imaging of microcalcifications in digital breast tomosynthesis through improved image-reconstruction algorithms. <i>Medical Physics</i> , 2009 , 36, 4920-32	4.4	123
71	A preliminary investigation of using prior information for potentially improving image reconstruction in few-view CT 2008 ,		2

70	In-depth analysis of cone-beam CT image reconstruction by ideal observer performance on a detection task 2008 ,		3
69	Exact reconstruction of volumetric images in reverse helical cone-beam CT. <i>Medical Physics</i> , 2008 , 35, 3030-40	4.4	17
68	Anniversary paper. Development of x-ray computed tomography: the role of medical physics and AAPM from the 1970s to present. <i>Medical Physics</i> , 2008 , 35, 3728-39	4.4	40
67	Image reconstruction in circular cone-beam computed tomography by constrained, total-variation minimization. <i>Physics in Medicine and Biology</i> , 2008 , 53, 4777-807	3.8	1178
66	Some Recent Developments in Reconstruction Algorithms for Tomographic Imaging 2008 , 361-391		
65	Noise properties of chord-image reconstruction. <i>IEEE Transactions on Medical Imaging</i> , 2007 , 26, 1328-44	11.7	8
64	Targeted-ROI imaging in electron paramagnetic resonance imaging. <i>Journal of Magnetic Resonance</i> , 2007 , 187, 66-77	3	7
63	A rebinned backprojection-filtration algorithm for image reconstruction in helical cone-beam CT. <i>Physics in Medicine and Biology</i> , 2007 , 52, 5497-508	3.8	8
62	Region-of-interest image reconstruction in circular cone-beam microCT. <i>Medical Physics</i> , 2007 , 34, 4923-34	11.7	23
61	AN EXACT ANALYTIC APPROACH TO 3D PET IMAGE RECONSTRUCTION. <i>International Journal of Image and Graphics</i> , 2007 , 07, 35-54	0.5	
60	Local cone-beam tomography image reconstruction on chords. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007 , 24, 1569-79	1.8	16
59	Image reconstruction from few views by non-convex optimization 2007 ,		18
58	A Rebinning-type Backprojection-Filtration Algorithm for Image Reconstruction in Helical Cone-beam CT 2006 ,		1
57	Accurate image reconstruction in circular cone-beam computed tomography by total variation minimization: a preliminary investigation 2006 ,		11
56	Region-of-interest reconstruction of motion-contaminated data using a weighted backprojection filtration algorithm. <i>Medical Physics</i> , 2006 , 33, 1222-38	4.4	8
55	Effect of the data constraint on few-view, fan-beam CT image reconstruction by TV minimization 2006 ,		11
54	Region of interest reconstruction from truncated data in circular cone-beam CT. <i>IEEE Transactions on Medical Imaging</i> , 2006 , 25, 869-81	11.7	67
53	Accurate image reconstruction in CT from projection data taken at few-views 2006 , 6142, 784		3

52	Recovering a compactly supported function from knowledge of its Hilbert transform on a finite interval. <i>IEEE Signal Processing Letters</i> , 2005 , 12, 97-100	3.2	14
51	Spatial-resolution enhancement in computed tomography. <i>IEEE Transactions on Medical Imaging</i> , 2005 , 24, 246-53	11.7	4
50	Theory and algorithms for image reconstruction on chords and within regions of interest. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2005 , 22, 2372-84	1.8	54
49	A hybrid approach to reducing computed tomography metal artifacts in intracavitary brachytherapy. <i>Brachytherapy</i> , 2005 , 4, 18-23	2.4	40
48	Minimum data image reconstruction algorithms with shift-invariant filtering for helical, cone-beam CT. <i>Physics in Medicine and Biology</i> , 2005 , 50, 1643-57	3.8	38
47	Reconstruction of 3D regions-of-interest from data in reduced helical cone-beam scans. <i>Technology in Cancer Research and Treatment</i> , 2005 , 4, 143-50	2.7	3
46	Image reconstruction in regions-of-interest from truncated projections in a reduced fan-beam scan. <i>Physics in Medicine and Biology</i> , 2005 , 50, 13-27	3.8	103
45	Image reconstruction in regions of interest from truncated Radon transforms of even dimensions. <i>Inverse Problems</i> , 2005 , 21, 1169-1177	2.3	7
44	Image reconstruction in peripheral and central regions-of-interest and data redundancy. <i>Medical Physics</i> , 2005 , 32, 673-84	4.4	57
43	Reconstruction of refractive index discontinuities from truncated phase-contrast tomography projections. <i>Applied Physics Letters</i> , 2005 , 86, 034102	3.4	13
42	PI-line-based image reconstruction in helical cone-beam computed tomography with a variable pitch. <i>Medical Physics</i> , 2005 , 32, 2639-48	4.4	19
41	An extended data function and its generalized backprojection for image reconstruction in helical cone-beam CT. <i>Physics in Medicine and Biology</i> , 2004 , 49, N383-7	3.8	61
40	Partial volume and aliasing artefacts in helical cone-beam CT. <i>Physics in Medicine and Biology</i> , 2004 , 49, 2365-75	3.8	22
39	Image reconstruction on PI-lines by use of filtered backprojection in helical cone-beam CT. <i>Physics in Medicine and Biology</i> , 2004 , 49, 2717-31	3.8	92
38	A unified analysis of FBP-based algorithms in helical cone-beam and circular cone- and fan-beam scans. <i>Physics in Medicine and Biology</i> , 2004 , 49, 4349-69	3.8	44
37	Exact image reconstruction on PI-lines from minimum data in helical cone-beam CT. <i>Physics in Medicine and Biology</i> , 2004 , 49, 941-59	3.8	230
36	Image reconstruction with a shift-variant filtration in circular cone-beam CT. <i>International Journal of Imaging Systems and Technology</i> , 2004 , 14, 213-221	2.5	15
35	Escheme short-scan SPECT and image reconstruction with nonuniform attenuation.. <i>IEEE Transactions on Nuclear Science</i> , 2003 , 50, 87-96	1.7	5

34	Image reconstruction with shift-variant filtration and its implication for noise and resolution properties in fan-beam computed tomography. <i>Medical Physics</i> , 2003 , 30, 590-600	4.4	36
33	A preliminary investigation of local tomography for megavoltage CT imaging. <i>Medical Physics</i> , 2003 , 30, 2969-80	4.4	15
32	Half-scan fan-beam computed tomography with improved noise and resolution properties. <i>Medical Physics</i> , 2003 , 30, 2629-37	4.4	21
31	Numerically robust minimal-scan reconstruction algorithms for diffraction tomography via radon transform inversion. <i>International Journal of Imaging Systems and Technology</i> , 2002 , 12, 84-91	2.5	1
30	Favorable noise uniformity properties of Fourier-based interpolation and reconstruction approaches in single-slice helical computed tomography. <i>Medical Physics</i> , 2002 , 29, 943-51	4.4	7
29	Short-scan SPECT imaging with non-uniform attenuation and 3D distance-dependent spatial resolution. <i>Physics in Medicine and Biology</i> , 2002 , 47, 2811-33	3.8	9
28	Toward optimal noniterative reconstruction for 3D SPECT with uniform attenuation and distance-dependent spatial resolution. <i>IEEE Transactions on Nuclear Science</i> , 2002 , 49, 774-781	1.7	
27	Transmission image reconstruction and redundant information in SPECT with asymmetric fanbeam collimation. <i>IEEE Transactions on Nuclear Science</i> , 2001 , 48, 1357-1363	1.7	9
26	Fourier-based approach to interpolation in single-slice helical computed tomography. <i>Medical Physics</i> , 2001 , 28, 381-92	4.4	6
25	Accurate image reconstruction using DOI information and its implications for the development of compact PET systems. <i>IEEE Transactions on Nuclear Science</i> , 2000 , 47, 1551-1560	1.7	17
24	Fast reconstruction with uniform noise properties in halfscan computed tomography. <i>Medical Physics</i> , 2000 , 27, 2031-6	4.4	6
23	A new reconstruction approach for reflection mode diffraction tomography. <i>IEEE Transactions on Image Processing</i> , 2000 , 9, 1262-71	8.7	5
22	Consistency conditions and linear reconstruction methods in diffraction tomography. <i>IEEE Transactions on Medical Imaging</i> , 2000 , 19, 51-4	11.7	2
21	Nonparametric regression sinogram smoothing using a roughness-penalized Poisson likelihood objective function. <i>IEEE Transactions on Medical Imaging</i> , 2000 , 19, 773-86	11.7	20
20	Fast implementation and quantitative evaluation of analytical methods with Wiener filters for image reconstruction in 3D SPECT. <i>IEEE Transactions on Nuclear Science</i> , 1999 , 46, 1100-1109	1.7	2
19	Optimal unbiased reduction of global image variances in SPECT. <i>IEEE Transactions on Nuclear Science</i> , 1999 , 46, 1148-1155	1.7	
18	A comparative study of image reconstructions in SPECT and ultrasonic diffraction tomography. <i>IEEE Transactions on Nuclear Science</i> , 1999 , 46, 527-534	1.7	
17	Optimal noise control in and fast reconstruction of fan-beam computed tomography image. <i>Medical Physics</i> , 1999 , 26, 689-97	4.4	48

16	A novel approach for multidimensional interpolation. <i>IEEE Signal Processing Letters</i> , 1999 , 6, 38-40	3.2	0
15	Multidimensional smoothing using orthogonal expansions. <i>IEEE Signal Processing Letters</i> , 1999 , 6, 91-94	3.2	1
14	A Bayesian approach for edge detection in medical ultrasound images. <i>IEEE Transactions on Nuclear Science</i> , 1998 , 45, 3089-3096	1.7	6
13	Noise propagation in diffraction tomography: comparison of conventional algorithms with a new reconstruction algorithm. <i>IEEE Transactions on Nuclear Science</i> , 1998 , 45, 2216-2223	1.7	8
12	Analysis of 3D SPECT image reconstruction and its extension to ultrasonic diffraction tomography. <i>IEEE Transactions on Nuclear Science</i> , 1998 , 45, 1308-1316	1.7	5
11	Quasi-bandlimited properties of radon transforms and their implications for increasing angular sampling densities. <i>IEEE Transactions on Medical Imaging</i> , 1998 , 17, 395-406	11.7	4
10	Image restoration and reconstruction with a Bayesian approach. <i>Medical Physics</i> , 1998 , 25, 600-13	4.4	11
9	A general approach for multidimensional smoothing. <i>Medical Physics</i> , 1998 , 25, 562-70	4.4	4
8	Correction to "A Class of Analytical Methods That Compensate for Attenuation and Spatially-Variant Resolution in 2D SPECT" [Erratum]. <i>IEEE Transactions on Nuclear Science</i> , 1996 , 43, 3377-3377	1.7	1
7	Volume image reconstruction from a straight-line source trajectory		8
6	Mathematical formulation of the potato peeler perspective		1
5	Exact ROI image reconstruction with perturbed source trajectories in C-arm CT		2
4	Reflectivity tomography using temporally truncated data		2
3	π -scheme short-scan SPECT and image reconstruction		2
2	A general technique for smoothing multi-dimensional datasets utilizing orthogonal expansions and lower dimensional smoothers		1
1	FFT-based approach to longitudinal interpolation in single- and multi-slice helical CT		1