

Simon Rit

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.

81
papers

1,609
citations

19
h-index

38
g-index

106
ext. papers

1,976
ext. citations

3.4
avg, IF

4.58
L-index

#	Paper	IF	Citations
81	Evaluation of registration methods on thoracic CT: the EMPIRE10 challenge. <i>IEEE Transactions on Medical Imaging</i> , 2011 , 30, 1901-20	11.7	311
80	Spatiotemporal motion estimation for respiratory-correlated imaging of the lungs. <i>Medical Physics</i> , 2011 , 38, 166-78	4.4	105
79	On-the-fly motion-compensated cone-beam CT using an a priori model of the respiratory motion. <i>Medical Physics</i> , 2009 , 36, 2283-96	4.4	102
78	The Reconstruction Toolkit (RTK), an open-source cone-beam CT reconstruction toolkit based on the Insight Toolkit (ITK). <i>Journal of Physics: Conference Series</i> , 2014 , 489, 012079	0.3	80
77	Automated segmentation of a motion mask to preserve sliding motion in deformable registration of thoracic CT. <i>Medical Physics</i> , 2012 , 39, 1006-15	4.4	62
76	Investigating deformable image registration and scatter correction for CBCT-based dose calculation in adaptive IMPT. <i>Medical Physics</i> , 2016 , 43, 5635	4.4	62
75	Filtered backprojection proton CT reconstruction along most likely paths. <i>Medical Physics</i> , 2013 , 40, 031103	4.4	61
74	Is abdominal compression useful in lung stereotactic body radiation therapy? A 4DCT and dosimetric lobe-dependent study. <i>Physica Medica</i> , 2013 , 29, 333-40	2.7	56
73	Registration of sliding objects using direction dependent B-splines decomposition. <i>Physics in Medicine and Biology</i> , 2013 , 58, 1303-14	3.8	53
72	Comparison of analytic and algebraic methods for motion-compensated cone-beam CT reconstruction of the thorax. <i>IEEE Transactions on Medical Imaging</i> , 2009 , 28, 1513-25	11.7	51
71	Quantification of the variability of diaphragm motion and implications for treatment margin construction. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012 , 82, e399-407	4	44
70	Regularization of nonlinear decomposition of spectral x-ray projection images. <i>Medical Physics</i> , 2017 , 44, e174-e187	4.4	40
69	Monte Carlo comparison of x-ray and proton CT for range calculations of proton therapy beams. <i>Physics in Medicine and Biology</i> , 2015 , 60, 7585-99	3.8	34
68	Comparative study of respiratory motion correction techniques in cone-beam computed tomography. <i>Radiotherapy and Oncology</i> , 2011 , 100, 356-9	5.3	32
67	Experimental comparison of proton CT and dual energy x-ray CT for relative stopping power estimation in proton therapy. <i>Physics in Medicine and Biology</i> , 2019 , 64, 165002	3.8	30
66	Comparison of five one-step reconstruction algorithms for spectral CT. <i>Physics in Medicine and Biology</i> , 2018 , 63, 235001	3.8	26
65	Cardiac C-arm computed tomography using a 3D + time ROI reconstruction method with spatial and temporal regularization. <i>Medical Physics</i> , 2014 , 41, 021903	4.4	25

64	Impact of probe pressure variability on prostate localization for ultrasound-based image-guided radiotherapy. <i>Radiotherapy and Oncology</i> , 2014 , 111, 132-7	5.3	23
63	SPARE: Sparse-view reconstruction challenge for 4D cone-beam CT from a 1-min scan. <i>Medical Physics</i> , 2019 , 46, 3799-3811	4.4	21
62	Regularised patient-specific stopping power calibration for proton therapy planning based on proton radiographic images. <i>Physics in Medicine and Biology</i> , 2019 , 64, 065008	3.8	19
61	Fast reconstruction of low dose proton CT by sinogram interpolation. <i>Physics in Medicine and Biology</i> , 2016 , 61, 5868-82	3.8	19
60	Evaluation of a new transperineal ultrasound probe for inter-fraction image-guidance for definitive and post-operative prostate cancer radiotherapy. <i>Physica Medica</i> , 2016 , 32, 499-505	2.7	19
59	Motion-aware temporal regularization for improved 4D cone-beam computed tomography. <i>Physics in Medicine and Biology</i> , 2016 , 61, 6856-6877	3.8	17
58	Split exponential track length estimator for Monte-Carlo simulations of small-animal radiation therapy. <i>Physics in Medicine and Biology</i> , 2014 , 59, 7703-15	3.8	17
57	Application of fluence field modulation to proton computed tomography for proton therapy imaging. <i>Physics in Medicine and Biology</i> , 2017 , 62, 6026-6043	3.8	16
56	A comprehensive theoretical comparison of proton imaging set-ups in terms of spatial resolution. <i>Physics in Medicine and Biology</i> , 2018 , 63, 135013	3.8	16
55	Comparison of projection- and image-based methods for proton stopping power estimation using dual energy CT. <i>Physics and Imaging in Radiation Oncology</i> , 2017 , 3, 28-36	3.1	16
54	Ultrasound versus Cone-beam CT image-guided radiotherapy for prostate and post-prostatectomy pretreatment localization. <i>Physica Medica</i> , 2015 , 31, 997-1004	2.7	15
53	Two-dimensional noise reconstruction in proton computed tomography using distance-driven filtered back-projection of simulated projections. <i>Physics in Medicine and Biology</i> , 2018 , 63, 215009	3.8	15
52	Decomposing a prior-CT-based cone-beam CT projection correction algorithm into scatter and beam hardening components. <i>Physics and Imaging in Radiation Oncology</i> , 2017 , 3, 49-52	3.1	14
51	Filtered-backprojection reconstruction for a cone-beam computed tomography scanner with independent source and detector rotations. <i>Medical Physics</i> , 2016 , 43, 2344	4.4	13
50	Deformable image registration applied to lung SBRT: Usefulness and limitations. <i>Physica Medica</i> , 2017 , 44, 108-112	2.7	12
49	Experimental fluence-modulated proton computed tomography by pencil beam scanning. <i>Medical Physics</i> , 2018 , 45, 3287-3296	4.4	12
48	On-the-fly motion-compensated cone-beam CT using an a priori motion model. <i>Lecture Notes in Computer Science</i> , 2008 , 11, 729-36	0.9	11
47	2D/4D marker-free tumor tracking using 4D CBCT as the reference image. <i>Physics in Medicine and Biology</i> , 2014 , 59, 2219-33	3.8	10

46	Towards Monte Carlo simulation of X-ray phase contrast using GATE. <i>Optics Express</i> , 2020 , 28, 14522-14535	3.5	10
45	Filtered back-projection reconstruction for attenuation proton CT along most likely paths. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3258-78	3.8	10
44	Feasibility of 4DCBCT-based proton dose calculation: An ex vivo porcine lung phantom study. <i>Zeitschrift Fur Medizinische Physik</i> , 2019 , 29, 249-261	7.6	10
43	Semiautomatic registration of 3D transabdominal ultrasound images for patient repositioning during postprostatectomy radiotherapy. <i>Medical Physics</i> , 2014 , 41, 122903	4.4	8
42	Respiratory signal extraction for 4D CT imaging of the thorax from cone-beam CT projections. <i>Lecture Notes in Computer Science</i> , 2005 , 8, 556-63	0.9	8
41	Technical Note: Relative proton stopping power estimation from virtual monoenergetic images reconstructed from dual-layer computed tomography. <i>Medical Physics</i> , 2019 , 46, 1821-1828	4.4	7
40	Optimization of dual-energy CT acquisitions for proton therapy using projection-based decomposition. <i>Medical Physics</i> , 2017 , 44, 4548-4558	4.4	7
39	Effects of transverse heterogeneities on the most likely path of protons. <i>Physics in Medicine and Biology</i> , 2019 , 64, 065003	3.8	6
38	Registration of phase-contrast images in propagation-based X-ray phase tomography. <i>Journal of Microscopy</i> , 2018 , 269, 36-47	1.9	6
37	A comparison of direct reconstruction algorithms in proton computed tomography. <i>Physics in Medicine and Biology</i> , 2020 , 65, 105010	3.8	5
36	An optimization algorithm for dose reduction with fluence-modulated proton CT. <i>Medical Physics</i> , 2020 , 47, 1895-1906	4.4	5
35	Fixed forced detection for fast SPECT Monte-Carlo simulation. <i>Physics in Medicine and Biology</i> , 2018 , 63, 055011	3.8	5
34	Calibration for Circular Cone-Beam CT Based on Consistency Conditions. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2017 , 1, 517-526	4.2	5
33	Technical Note: Procedure for the calibration and validation of kilo-voltage cone-beam CT models. <i>Medical Physics</i> , 2016 , 43, 5199	4.4	5
32	. <i>IEEE Access</i> , 2021 , 9, 25632-25647	3.5	5
31	Dose fractionation in synchrotron radiation x-ray phase micro-tomography. <i>Physics in Medicine and Biology</i> , 2015 , 60, 7543-66	3.8	4
30	Scattering proton CT. <i>Physics in Medicine and Biology</i> , 2020 , 65, 225015	3.8	4
29	The role of Monte Carlo simulation in understanding the performance of proton computed tomography. <i>Zeitschrift Fur Medizinische Physik</i> , 2020 , 32, 23-23	7.6	4

28	Accurate Transaxial Region-of-Interest Reconstruction in Helical CT?. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2017 , 1, 334-345	4.2	3
27	In vivo gadolinium nanoparticle quantification with SPECT/CT. <i>EJNMMI Physics</i> , 2019 , 6, 9	4.4	3
26	Data Consistency Conditions for Cone-Beam Projections on a Circular Trajectory. <i>IEEE Signal Processing Letters</i> , 2016 , 23, 1746-1750	3.2	3
25	Learning directional relative positions between mediastinal lymph node stations and organs. <i>Medical Physics</i> , 2014 , 41, 061905	4.4	3
24	Removing streak artifacts from ECG-gated reconstructions using deconvolution. <i>Journal of X-Ray Science and Technology</i> , 2014 , 22, 253-70	2.1	3
23	Scatter Correction for Spectral CT Using a Primary Modulator Mask. <i>IEEE Transactions on Medical Imaging</i> , 2020 , 39, 2267-2276	11.7	2
22	Image Formation in Spectral Computed Tomography 2020 , 355-372		2
21	Mid-position treatment strategy for locally advanced lung cancer: a dosimetric study. <i>British Journal of Radiology</i> , 2020 , 93, 20190692	3.4	2
20	Deriving the mean excitation energy map from dual-energy and proton computed tomography. <i>Physics and Imaging in Radiation Oncology</i> , 2018 , 6, 20-24	3.1	2
19	SciFi detector and associated method for real-time determination of profile and output factor for small fields in stereotactic radiotherapy. <i>Medical Physics</i> , 2020 , 47, 1930-1939	4.4	1
18	Binary tomography reconstruction from few projections with Total Variation regularization for bone microstructure studies. <i>Journal of X-Ray Science and Technology</i> , 2016 , 24, 177-89	2.1	1
17	In-room breathing motion estimation from limited projection views using a sliding deformation model. <i>Journal of Physics: Conference Series</i> , 2014 , 489, 012026	0.3	1
16	Cone-beam projection of a deformable volume for motion compensated algebraic reconstruction. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 6544-7		1
15	Optimized conversion from CT numbers to proton relative stopping power based on proton radiography and scatter corrected cone-beam CT images 2019 ,		1
14	Projection-based dynamic tomography. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	1
13	SU-F-J-214: Dose Reduction by Spatially Optimized Image Quality Via Fluence Modulated Proton CT (FMpCT). <i>Medical Physics</i> , 2016 , 43, 3458-3458	4.4	1
12	Intensity-Based Deformable Registration: Introduction and Overview 2013 , 103-124		1
11	Anthropomorphic lung phantom based validation of in-room proton therapy 4D-CBCT image correction for dose calculation. <i>Zeitschrift Fur Medizinische Physik</i> , 2020 , 32, 74-74	7.6	1

10	. <i>IEEE Transactions on Nuclear Science</i> , 2016 , 63, 1408-1418	1.7	○
9	Algebraic and analytic reconstruction methods for dynamic tomography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 726-30		○
8	Abstract ID: 85 Investigating the physics of a CBCT projection shading correction based on a prior CT. <i>Physica Medica</i> , 2017 , 42, 17-18	2.7	
7	Realistic Simulations for the Evaluation of Monomodal Registration Algorithms of 3D Pelvic Ultrasound Images. <i>Physics Procedia</i> , 2015 , 70, 1169-1172		
6	Development of 2D+T tracking algorithm in ultrasound images for radiotherapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 2916-9	0.9	
5	Motion artifact detection in four-dimensional computed tomography images. <i>Journal of Physics: Conference Series</i> , 2014 , 489, 012024	0.3	
4	SU-F-J-186: Enabling Adaptive IMPT with CBCT-Based Dose Recalculation for H&N and Prostate Cancer Patients. <i>Medical Physics</i> , 2016 , 43, 3451-3451	4.4	
3	Respiratory Motion Correction in Cone-Beam CT for Image-Guided Radiotherapy 2013 , 319-334		
2	MO-F-WAB-09: Improvement of Digitally Reconstructed Radiograph Quality of Thoracic 4D Cone Beam Computed Tomography. <i>Medical Physics</i> , 2013 , 40, 411-411	4.4	
1	Region-of-Interest CT Reconstruction using Object Extent and Singular Value Decomposition. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2021 , 1-1	4.2	