

Gregory C Sharp

List of Publications by Citations

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107
papers

3,585
citations

30
h-index

58
g-index

114
ext. papers

4,235
ext. citations

3.3
avg, IF

5.03
L-index

#	Paper	IF	Citations
107	Evaluation of registration methods on thoracic CT: the EMPIRE10 challenge. <i>IEEE Transactions on Medical Imaging</i> , 2011 , 30, 1901-20	11.7	311
106	Prediction of respiratory tumour motion for real-time image-guided radiotherapy. <i>Physics in Medicine and Biology</i> , 2004 , 49, 425-40	3.8	296
105	The correlation between internal and external markers for abdominal tumors: implications for respiratory gating. <i>International Journal of Radiation Oncology Biology Physics</i> , 2005 , 61, 1551-8	4	179
104	Vision 20/20: perspectives on automated image segmentation for radiotherapy. <i>Medical Physics</i> , 2014 , 41, 050902	4.4	174
103	Speed and amplitude of lung tumor motion precisely detected in four-dimensional setup and in real-time tumor-tracking radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2006 , 64, 1229-36	4	160
102	Integrated radiotherapy imaging system (IRIS): design considerations of tumour tracking with linac gantry-mounted diagnostic x-ray systems with flat-panel detectors. <i>Physics in Medicine and Biology</i> , 2004 , 49, 243-55	3.8	156
101	Towards fluoroscopic respiratory gating for lung tumours without radiopaque markers. <i>Physics in Medicine and Biology</i> , 2005 , 50, 4481-90	3.8	126
100	Evaluation of segmentation methods on head and neck CT: Auto-segmentation challenge 2015. <i>Medical Physics</i> , 2017 , 44, 2020-2036	4.4	125
99	Why rankings of biomedical image analysis competitions should be interpreted with care. <i>Nature Communications</i> , 2018 , 9, 5217	17.4	112
98	Evaluation of deformable registration of patient lung 4DCT with subanatomical region segmentations. <i>Medical Physics</i> , 2008 , 35, 775-81	4.4	110
97	4D-CT lung motion estimation with deformable registration: quantification of motion nonlinearity and hysteresis. <i>Medical Physics</i> , 2008 , 35, 1008-18	4.4	106
96	Autosegmentation for thoracic radiation treatment planning: A grand challenge at AAPM 2017. <i>Medical Physics</i> , 2018 , 45, 4568-4581	4.4	96
95	Multiview registration of 3D scenes by minimizing error between coordinate frames. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2004 , 26, 1037-50	13.3	83
94	Automatic segmentation of head and neck CT images for radiotherapy treatment planning using multiple atlases, statistical appearance models, and geodesic active contours. <i>Medical Physics</i> , 2014 , 41, 051910	4.4	81
93	Multiple template-based fluoroscopic tracking of lung tumor mass without implanted fiducial markers. <i>Physics in Medicine and Biology</i> , 2007 , 52, 6229-42	3.8	77
92	Proton dose calculation on scatter-corrected CBCT image: Feasibility study for adaptive proton therapy. <i>Medical Physics</i> , 2015 , 42, 4449-59	4.4	75
91	Four-dimensional measurement of intrafractional respiratory motion of pancreatic tumors using a 256 multi-slice CT scanner. <i>Radiotherapy and Oncology</i> , 2009 , 92, 231-7	5.3	70

90	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
89	A finite state model for respiratory motion analysis in image guided radiation therapy. <i>Physics in Medicine and Biology</i> , 2004 , 49, 5357-72	3.8	58
88	Scale invariant feature transform in adaptive radiation therapy: a tool for deformable image registration assessment and re-planning indication. <i>Physics in Medicine and Biology</i> , 2013 , 58, 287-99	3.8	53
87	In vivo proton beam range verification using spine MRI changes. <i>International Journal of Radiation Oncology Biology Physics</i> , 2010 , 78, 268-75	4	53
86	Experimental validation of two dual-energy CT methods for proton therapy using heterogeneous tissue samples. <i>Medical Physics</i> , 2018 , 45, 48-59	4.4	49
85	A four-dimensional computed tomography analysis of multiorgan abdominal motion. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012 , 83, 435-41	4	47
84	A review of image-guided radiotherapy. <i>Radiological Physics and Technology</i> , 2009 , 2, 1-12	1.7	41
83	A respiratory-gated treatment system for proton therapy. <i>Medical Physics</i> , 2007 , 34, 3273-8	4.4	40
82	Deep Neural Networks for Fast Segmentation of 3D Medical Images. <i>Lecture Notes in Computer Science</i> , 2016 , 158-165	0.9	38
81	A voluntary breath-hold treatment technique for the left breast with unfavorable cardiac anatomy using surface imaging. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012 , 84, e663-8	4	36
80	Subsequence matching on structured time series data 2005 ,		35
79	Technical Note: plastimatch mabs, an open source tool for automatic image segmentation. <i>Medical Physics</i> , 2016 , 43, 5155	4.4	34
78	Tracking errors in a prototype real-time tumour tracking system. <i>Physics in Medicine and Biology</i> , 2004 , 49, 5347-56	3.8	32
77	Numerical solutions of the Index in two and three dimensions. <i>Physics in Medicine and Biology</i> , 2012 , 57, 6981-97	3.8	30
76	Variations in tumor size and position due to irregular breathing in 4D-CT: a simulation study. <i>Medical Physics</i> , 2010 , 37, 1254-60	4.4	29
75	Evaluation of the dosimetric impact of interfractional anatomical variations on prostate proton therapy using daily in-room CT images. <i>Medical Physics</i> , 2011 , 38, 4623-33	4.4	29
74	Tumor trailing strategy for intensity-modulated radiation therapy of moving targets. <i>Medical Physics</i> , 2008 , 35, 1718-33	4.4	28
73	A Contralateral Esophagus-Sparing Technique to Limit Severe Esophagitis Associated With Concurrent High-Dose Radiation and Chemotherapy in Patients With Thoracic Malignancies. <i>International Journal of Radiation Oncology Biology Physics</i> , 2015 , 92, 803-10	4	24

72	Comparison of respiratory-gated and respiratory-ungated planning in scattered carbon ion beam treatment of the pancreas using four-dimensional computed tomography. <i>International Journal of Radiation Oncology Biology Physics</i> , 2010 , 76, 303-12	4	24
71	Statistical analysis and correlation discovery of tumor respiratory motion. <i>Physics in Medicine and Biology</i> , 2007 , 52, 4761-74	3.8	24
70	Multi-organ segmentation of the head and neck area: an efficient hierarchical neural networks approach. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2019 , 14, 745-754	3.9	21
69	Fast automatic 3D liver segmentation based on a three-level AdaBoost-guided active shape model. <i>Medical Physics</i> , 2016 , 43, 2421	4.4	21
68	Correlation of (18)F-FDG avid volumes on pre-radiation therapy and post-radiation therapy FDG PET scans in recurrent lung cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 89, 137-44	4	20
67	Proton range shift analysis on brain pseudo-CT generated from T1 and T2 MR. <i>Acta Oncologica</i> , 2018 , 57, 1521-1531	3.2	20
66	The distance discordance metric-a novel approach to quantifying spatial uncertainties in intra- and inter-patient deformable image registration. <i>Physics in Medicine and Biology</i> , 2014 , 59, 733-46	3.8	19
65	Analytic regularization for landmark-based image registration. <i>Physics in Medicine and Biology</i> , 2012 , 57, 1477-98	3.8	19
64	Evaluation and commissioning of a surface based system for respiratory sensing in 4D CT. <i>Journal of Applied Clinical Medical Physics</i> , 2010 , 12, 3288	2.3	18
63	Evaluation of CBCT scatter correction using deep convolutional neural networks for head and neck adaptive proton therapy. <i>Physics in Medicine and Biology</i> , 2020 ,	3.8	15
62	Anatomic feature-based registration for patient set-up in head and neck cancer radiotherapy. <i>Physics in Medicine and Biology</i> , 2005 , 50, 4667-79	3.8	15
61	Water equivalent path length calculations using scatter-corrected head and neck CBCT images to evaluate patients for adaptive proton therapy. <i>Physics in Medicine and Biology</i> , 2017 , 62, 59-72	3.8	14
60	Four-dimensional lung treatment planning in layer-stacking carbon ion beam treatment: comparison of layer-stacking and conventional ungated/gated irradiation. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011 , 80, 597-607	4	13
59	Experimental evaluation of a robust optimization method for IMRT of moving targets. <i>Physics in Medicine and Biology</i> , 2009 , 54, 2901-14	3.8	13
58	Multi atlas based segmentation: should we prefer the best atlas group over the group of best atlases?. <i>Physics in Medicine and Biology</i> , 2018 , 63, 12NT01	3.8	13
57	A Prospective Comparison of the Effects of Interfractional Variations on Proton Therapy and Intensity Modulated Radiation Therapy for Prostate Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016 , 95, 444-453	4	12
56	A Stochastic Approach to Diffeomorphic Point Set Registration with Landmark Constraints. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2016 , 38, 238-51	13.3	12
55	Contour-driven regression for label inference in atlas-based segmentation. <i>Lecture Notes in Computer Science</i> , 2013 , 16, 211-8	0.9	12

54	Improvement of single detector proton radiography by incorporating intensity of time-resolved dose rate functions. <i>Physics in Medicine and Biology</i> , 2017 , 63, 015030	3.8	11
53	Density overwrites of internal tumor volumes in intensity modulated proton therapy plans for mobile lung tumors. <i>Physics in Medicine and Biology</i> , 2018 , 63, 035023	3.8	11
52	Assessing residual motion for gated proton-beam radiotherapy. <i>Journal of Radiation Research</i> , 2007 , 48 Suppl A, A55-9	2.4	11
51	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
50	Uncertainties in lung motion prediction relying on external surrogate: a 4DCT study in regular vs. irregular breathers. <i>Technology in Cancer Research and Treatment</i> , 2010 , 9, 307-16	2.7	9
49	Maximum-likelihood registration of range images with missing data. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , 2008 , 30, 120-30	13.3	8
48	Validation of a model for physical dose variations in irregularly moving targets treated with carbon ion beams. <i>Medical Physics</i> , 2019 , 46, 3663-3673	4.4	7
47	Impact of aeration change and beam arrangement on the robustness of proton plans. <i>Journal of Applied Clinical Medical Physics</i> , 2019 , 20, 14-21	2.3	7
46	Computing proton dose to irregularly moving targets. <i>Physics in Medicine and Biology</i> , 2014 , 59, 4261-73	3.8	7
45	Adaptive proton therapy. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	7
44	Multiview Registration of 3D Scenes by Minimizing Error between Coordinate Frames. <i>Lecture Notes in Computer Science</i> , 2002 , 587-597	0.9	7
43	Iterative optimization of relative stopping power by single detector based multi-projection proton radiography. <i>Physics in Medicine and Biology</i> , 2019 , 64, 065022	3.8	6
42	Impact of interfractional motion on hypofractionated pencil beam scanning proton therapy and VMAT delivery for prostate cancer. <i>Medical Physics</i> , 2018 , 45, 4011	4.4	6
41	Robust fluoroscopic tracking of fiducial markers: exploiting the spatial constraints. <i>Physics in Medicine and Biology</i> , 2013 , 58, 1789-808	3.8	6
40	Hypofractionated proton therapy for prostate cancer: dose delivery uncertainty due to interfractional motion. <i>Medical Physics</i> , 2013 , 40, 071714	4.4	6
39	Analytic regularization of uniform cubic B-spline deformation fields. <i>Lecture Notes in Computer Science</i> , 2012 , 15, 122-9	0.9	6
38	Differential inflammatory response dynamics in normal lung following stereotactic body radiation therapy with protons versus photons. <i>Radiotherapy and Oncology</i> , 2019 , 136, 169-175	5.3	5
37	Investigation of real tissue water equivalent path lengths using an efficient dose extinction method. <i>Physics in Medicine and Biology</i> , 2017 , 62, 5640-5651	3.8	5

36	Locally Deformable Shape Model to Improve 3D Level Set based Esophagus Segmentation 2010 , 3955-3958	5
35	Centerline extraction with principal curve tracing to improve 3D level set esophagus segmentation in CT images. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference, 2011</i> , 2011, 3403-6	0.9 5
34	Image registration using radial basis functions with adaptive radius. <i>Medical Physics</i> , 2012 , 39, 6542-9	4.4 5
33	Influence of imaging source and panel position uncertainties on the accuracy of 2D/3D image registration of cranial images. <i>Medical Physics</i> , 2012 , 39, 5547-56	4.4 5
32	Anatomic changes in head and neck intensity-modulated proton therapy: Comparison between robust optimization and online adaptation. <i>Radiotherapy and Oncology</i> , 2021 , 159, 39-47	5.3 5
31	Investigation of cone-beam CT image quality trade-off for image-guided radiation therapy. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3317-46	3.8 5
30	Comparison of weekly and daily online adaptation for head and neck intensity-modulated proton therapy. <i>Physics in Medicine and Biology</i> , 2021 ,	3.8 5
29	How to Exploit Weaknesses in Biomedical Challenge Design and Organization. <i>Lecture Notes in Computer Science</i> , 2018 , 388-395	0.9 5
28	Clinical implementation and error sensitivity of a 3D quality assurance protocol for prostate and thoracic IMRT. <i>Journal of Applied Clinical Medical Physics</i> , 2015 , 16, 179-192	2.3 4
27	Beam angle optimization using angular dependency of range variation assessed via water equivalent path length (WEPL) calculation for head and neck proton therapy. <i>Physica Medica</i> , 2020 , 69, 19-27	2.7 4
26	Advanced Multimodal Methods for Cranial Pseudo-CT Generation Validated by IMRT and VMAT Radiation Therapy Plans. <i>International Journal of Radiation Oncology Biology Physics</i> , 2018 , 102, 792-800	4 4
25	Clinical evaluation of a novel transmission detector for 3D quality assurance of IMRT and SBRT. <i>Biomedical Physics and Engineering Express</i> , 2017 , 3, 055010	1.5 3
24	Modeling RBE-weighted dose variations in irregularly moving abdominal targets treated with carbon ion beams. <i>Medical Physics</i> , 2020 , 47, 2768-2778	4.4 3
23	A multiple-image-based method to evaluate the performance of deformable image registration in the pelvis. <i>Physics in Medicine and Biology</i> , 2016 , 61, 6172-80	3.8 3
22	Evaluation of an scatter correction algorithm for cone-beam computed tomography based range and dose calculations in proton therapy. <i>Physics and Imaging in Radiation Oncology</i> , 2020 , 16, 89-94	3.1 3
21	A single detector energy-resolved proton radiography system: a proof of principle study by Monte Carlo simulations. <i>Physics in Medicine and Biology</i> , 2019 , 64, 025016	3.8 3
20	Performing radiation therapy research using the open-source SlicerRT toolkit. <i>IFMBE Proceedings</i> , 2015 , 622-625	0.2 2
19	Learning methods for lung tumor markerless gating in image-guided radiotherapy 2008 ,	2

18	Technical Note: A novel dosimeter improves total skin electron therapy surface dosimetry workflow. <i>Journal of Applied Clinical Medical Physics</i> , 2020 , 21, 158-162	2.3	2
17	Kilovoltage projection streaming-based tracking application (KiPSTA): First clinical implementation during spine stereotactic radiation surgery. <i>Advances in Radiation Oncology</i> , 2018 , 3, 682-692	3.3	2
16	Gain Correction for an X-ray Imaging System With a Movable Flat Panel Detector and Intrinsic Localization Crosshair. <i>Technology in Cancer Research and Treatment</i> , 2016 , 15, 387-95	2.7	1
15	Intra-fraction motion prediction in MRI-guided radiation therapy using Markov processes. <i>Physics in Medicine and Biology</i> , 2019 , 64, 195006	3.8	1
14	Correlation of 18F-FDG PET avid volumes on pre-radiation therapy and post-radiation therapy FDG PET scans in recurrent lung cancer. In reply to Saraiya et al. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 90, 969-70	4	1
13	Plastimatch [®] An Open-Source Software for Radiotherapy Imaging 2013 , 107-114		1
12	3D level set esophagus segmentation in thoracic CT images using spatial, appearance and shape models 2010 ,		1
11	Dosimetric variation due to CT inter-slice spacing in four-dimensional carbon beam lung therapy. <i>Physics in Medicine and Biology</i> , 2009 , 54, 3231-46	3.8	1
10	An Online Control Framework for Designing Self-Optimizing Computing Systems: Application to Power Management. <i>Lecture Notes in Computer Science</i> , 2005 , 174-188	0.9	1
9	An online predictive control framework for designing self-managing computing systems. <i>Multiagent and Grid Systems</i> , 2005 , 1, 63-72	0.5	1
8	A new respiratory monitor system for four-dimensional computed tomography by measuring the pressure change on the back of body. <i>British Journal of Radiology</i> , 2020 , 93, 20190303	3.4	1
7	Technical Note: Cumulative dose modeling for organ motion management in MRI-guided radiation therapy. <i>Medical Physics</i> , 2021 , 48, 597-604	4.4	1
6	Subject-specific Brain Tumor Growth Modelling via An Efficient Bayesian Inference Framework. <i>Proceedings of SPIE</i> , 2018 , 10574,	1.7	1
5	Physics of Particle Beam and Hypofractionated Beam Delivery in NSCLC. <i>Seminars in Radiation Oncology</i> , 2021 , 31, 162-169	5.5	0
4	Deformable Registration Using Optical-Flow Methods 2013 , 95-106		
3	Deformable Volumetric Registration Using B-Splines 2011 , 751-770		
2	Monte Carlo Simulation of Performance of a Time-Resolved Range Telescope Using Selected Image Quality Assurance Phantoms. <i>Nuclear Technology</i> , 2011 , 175, 58-62	1.4	
1	TU-G-BRB-04: Optimal Frequency of CT Imaging for Monitoring Target Volume and Estimating Delivered Dose in Standard and Hypofractionated Prostate Proton Therapy. <i>Medical Physics</i> , 2011 , 38, 3779-3779	4.4	

