

# Tonghe Wang

## List of Publications by Citations

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89  
papers

1,667  
citations

23  
h-index

37  
g-index

101  
ext. papers

2,660  
ext. citations

3.6  
avg, IF

5.36  
L-index

#	Paper	IF	Citations
89	Automatic multiorgan segmentation in thorax CT images using U-net-GAN. <i>Medical Physics</i> , <b>2019</b> , 46, 2157-2168	4.4	128
88	Deep learning in medical image registration: a review. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 20TR01	3.8	102
87	MRI-only based synthetic CT generation using dense cycle consistent generative adversarial networks. <i>Medical Physics</i> , <b>2019</b> , 46, 3565-3581	4.4	95
86	Deeply supervised 3D fully convolutional networks with group dilated convolution for automatic MRI prostate segmentation. <i>Medical Physics</i> , <b>2019</b> , 46, 1707-1718	4.4	90
85	Paired cycle-GAN-based image correction for quantitative cone-beam computed tomography. <i>Medical Physics</i> , <b>2019</b> , 46, 3998-4009	4.4	74
84	Synthetic MRI-aided multi-organ segmentation on male pelvic CT using cycle consistent deep attention network. <i>Radiotherapy and Oncology</i> , <b>2019</b> , 141, 192-199	5.3	55
83	Ultrasound prostate segmentation based on multidirectional deeply supervised V-Net. <i>Medical Physics</i> , <b>2019</b> , 46, 3194-3206	4.4	52
82	Deep learning-based attenuation correction in the absence of structural information for whole-body positron emission tomography imaging. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 055011	3.8	49
81	A learning-based automatic segmentation and quantification method on left ventricle in gated myocardial perfusion SPECT imaging: A feasibility study. <i>Journal of Nuclear Cardiology</i> , <b>2020</b> , 27, 976-987 <sup>2.1</sup>		46
80	A review on medical imaging synthesis using deep learning and its clinical applications. <i>Journal of Applied Clinical Medical Physics</i> , <b>2021</b> , 22, 11-36	2.3	38
79	MRI-based treatment planning for proton radiotherapy: dosimetric validation of a deep learning-based liver synthetic CT generation method. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 145015	3.8	37
78	CBCT-based synthetic CT generation using deep-attention cycleGAN for pancreatic adaptive radiotherapy. <i>Medical Physics</i> , <b>2020</b> , 47, 2472-2483	4.4	36
77	Whole-body PET estimation from low count statistics using cycle-consistent generative adversarial networks. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 215017	3.8	35
76	Synthetic CT generation from non-attenuation corrected PET images for whole-body PET imaging. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 215016	3.8	34
75	MRI-based treatment planning for brain stereotactic radiosurgery: Dosimetric validation of a learning-based pseudo-CT generation method. <i>Medical Dosimetry</i> , <b>2019</b> , 44, 199-204	1.3	34
74	CT prostate segmentation based on synthetic MRI-aided deep attention fully convolution network. <i>Medical Physics</i> , <b>2020</b> , 47, 530-540	4.4	34
73	Male pelvic multi-organ segmentation aided by CBCT-based synthetic MRI. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 035013	3.8	32

72	MRI-based treatment planning for liver stereotactic body radiotherapy: validation of a deep learning-based synthetic CT generation method. <i>British Journal of Radiology</i> , <b>2019</b> , 92, 20190067	3.4	31
71	LungRegNet: An unsupervised deformable image registration method for 4D-CT lung. <i>Medical Physics</i> , <b>2020</b> , 47, 1763-1774	4.4	29
70	Noise suppression for dual-energy CT via penalized weighted least-square optimization with similarity-based regularization. <i>Medical Physics</i> , <b>2016</b> , 43, 2676	4.4	29
69	Machine learning in quantitative PET: A review of attenuation correction and low-count image reconstruction methods. <i>Physica Medica</i> , <b>2020</b> , 76, 294-306	2.7	26
68	Learning-based CBCT correction using alternating random forest based on auto-context model. <i>Medical Physics</i> , <b>2019</b> , 46, 601-618	4.4	25
67	Evaluation of a deep learning-based pelvic synthetic CT generation technique for MRI-based prostate proton treatment planning. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 205022	3.8	23
66	Learning-based automatic segmentation of arteriovenous malformations on contrast CT images in brain stereotactic radiosurgery. <i>Medical Physics</i> , <b>2019</b> , 46, 3133-3141	4.4	23
65	MRI-based attenuation correction for brain PET/MRI based on anatomic signature and machine learning. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 025001	3.8	23
64	4D-CT deformable image registration using multiscale unsupervised deep learning. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 085003	3.8	22
63	Dose evaluation of MRI-based synthetic CT generated using a machine learning method for prostate cancer radiotherapy. <i>Medical Dosimetry</i> , <b>2019</b> , 44, e64-e70	1.3	21
62	MRI-based synthetic CT generation using semantic random forest with iterative refinement. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 085001	3.8	19
61	MRI-based pseudo CT synthesis using anatomical signature and alternating random forest with iterative refinement model. <i>Journal of Medical Imaging</i> , <b>2018</b> , 5, 043504	2.6	18
60	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> , <b>2016</b> , 61, 6684-6706	3.8	18
59	Label-driven magnetic resonance imaging (MRI)-transrectal ultrasound (TRUS) registration using weakly supervised learning for MRI-guided prostate radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 135002	3.8	16
58	Pelvic multi-organ segmentation on cone-beam CT for prostate adaptive radiotherapy. <i>Medical Physics</i> , <b>2020</b> , 47, 3415-3422	4.4	16
57	CT-based multi-organ segmentation using a 3D self-attention U-net network for pancreatic radiotherapy. <i>Medical Physics</i> , <b>2020</b> , 47, 4316-4324	4.4	16
56	Breast tumor segmentation in 3D automatic breast ultrasound using Mask scoring R-CNN. <i>Medical Physics</i> , <b>2021</b> , 48, 204-214	4.4	16
55	Optimal virtual monoenergetic image in "TwinBeam" dual-energy CT for organs-at-risk delineation based on contrast-noise-ratio in head-and-neck radiotherapy. <i>Journal of Applied Clinical Medical Physics</i> , <b>2019</b> , 20, 121-128	2.3	15

54	Dosimetric study on learning-based cone-beam CT correction in adaptive radiation therapy. <i>Medical Dosimetry</i> , <b>2019</b> , 44, e71-e79	1.3	15
53	Multi-needle Localization with Attention U-Net in US-guided HDR Prostate Brachytherapy. <i>Medical Physics</i> , <b>2020</b> , 47, 2735-2745	4.4	15
52	Magnetic resonance imaging-based pseudo computed tomography using anatomic signature and joint dictionary learning. <i>Journal of Medical Imaging</i> , <b>2018</b> , 5, 034001	2.6	15
51	A review of deep learning based methods for medical image multi-organ segmentation. <i>Physica Medica</i> , <b>2021</b> , 85, 107-122	2.7	15
50	Multiparametric MRI-guided dose boost to dominant intraprostatic lesions in CT-based High-dose-rate prostate brachytherapy. <i>British Journal of Radiology</i> , <b>2019</b> , 92, 20190089	3.4	13
49	Multi-Needle Detection in 3D Ultrasound Images Using Unsupervised Order-Graph Regularized Sparse Dictionary Learning. <i>IEEE Transactions on Medical Imaging</i> , <b>2020</b> , 39, 2302-2315	11.7	13
48	Automatic multi-catheter detection using deeply supervised convolutional neural network in MRI-guided HDR prostate brachytherapy. <i>Medical Physics</i> , <b>2020</b> , 47, 4115-4124	4.4	12
47	Deep learning-based image quality improvement for low-dose computed tomography simulation in radiation therapy. <i>Journal of Medical Imaging</i> , <b>2019</b> , 6, 043504	2.6	12
46	Deformable MR-CBCT prostate registration using biomechanically constrained deep learning networks. <i>Medical Physics</i> , <b>2021</b> , 48, 253-263	4.4	12
45	MRI-Based Proton Treatment Planning for Base of Skull Tumors. <i>International Journal of Particle Therapy</i> , <b>2019</b> , 6, 12-25	1.5	11
44	Automated left ventricular myocardium segmentation using 3D deeply supervised attention U-net for coronary computed tomography angiography; CT myocardium segmentation. <i>Medical Physics</i> , <b>2020</b> , 47, 1775-1785	4.4	11
43	Biomechanically constrained non-rigid MR-TRUS prostate registration using deep learning based 3D point cloud matching. <i>Medical Image Analysis</i> , <b>2021</b> , 67, 101845	15.4	11
42	Head and neck multi-organ auto-segmentation on CT images aided by synthetic MRI. <i>Medical Physics</i> , <b>2020</b> , 47, 4294-4302	4.4	10
41	Cone-beam CT-derived relative stopping power map generation via deep learning for proton radiotherapy. <i>Medical Physics</i> , <b>2020</b> , 47, 4416-4427	4.4	9
40	Automated prostate segmentation of volumetric CT images using 3D deeply supervised dilated FCN <b>2019</b> ,		9
39	A preliminary study on a multiresolution-level inverse planning approach for Gamma Knife radiosurgery. <i>Medical Physics</i> , <b>2020</b> , 47, 1523-1532	4.4	8
38	Intensity non-uniformity correction in MR imaging using residual cycle generative adversarial network. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 215025	3.8	8
37	Head-and-neck organs-at-risk auto-delineation using dual pyramid networks for CBCT-guided adaptive radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66, 045021	3.8	8

36	Automatic segmentation and quantification of epicardial adipose tissue from coronary computed tomography angiography. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 095012	3.8	7
35	4D-CT Deformable Image Registration Using an Unsupervised Deep Convolutional Neural Network. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 26-33	0.9	7
34	A planning study of focal dose escalations to multiparametric MRI-defined dominant intraprostatic lesions in prostate proton radiation therapy. <i>British Journal of Radiology</i> , <b>2020</b> , 93, 20190845	3.4	7
33	Improving Image Quality of Cone-Beam CT Using Alternating Regression Forest. <i>Proceedings of SPIE</i> , <b>2018</b> , 10573,	1.7	6
32	Synthetic dual-energy CT for MRI-only based proton therapy treatment planning using label-GAN. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66, 065014	3.8	6
31	Image quality improvement in cone-beam CT using deep learning <b>2019</b> ,		5
30	Ultrasound prostate segmentation based on 3D V-Net with deep supervision <b>2019</b> ,		5
29	Automatic multi-needle localization in ultrasound images using large margin mask RCNN for ultrasound-guided prostate brachytherapy. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 205003	3.8	5
28	Deep learning-based real-time volumetric imaging for lung stereotactic body radiation therapy: a proof of concept study. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 235003	3.8	5
27	Pixel-wise estimation of noise statistics on iterative CT reconstruction from a single scan. <i>Medical Physics</i> , <b>2017</b> , 44, 3525-3533	4.4	4
26	Image-domain non-uniformity correction for cone-beam CT <b>2017</b> ,		4
25	MRI-based synthetic CT generation using deep convolutional neural network <b>2019</b> ,		4
24	Deep attentional GAN-based high-resolution ultrasound imaging <b>2020</b> ,		4
23	Learning-based synthetic dual energy CT imaging from single energy CT for stopping power ratio calculation in proton radiation therapy. <i>British Journal of Radiology</i> , <b>2022</b> , 95, 20210644	3.4	4
22	Noise suppression for energy-resolved CT using similarity-based non-local filtration <b>2016</b> ,		3
21	A Denoising Algorithm for CT Image Using Low-rank Sparse Coding. <i>Proceedings of SPIE</i> , <b>2018</b> , 10574,	1.7	3
20	Male pelvic CT multi-organ segmentation using synthetic MRI-aided dual pyramid networks. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	3
19	Learning-based dose prediction for pancreatic stereotactic body radiation therapy using dual pyramid adversarial network. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	3

18	Automated delineation of head and neck organs at risk using synthetic MRI-aided mask scoring regional convolutional neural network. <i>Medical Physics</i> , <b>2021</b> , 48, 5862-5873	4.4	3
17	CBCT-Based Synthetic MRI Generation for CBCT-Guided Adaptive Radiotherapy. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 154-161	0.9	2
16	Male pelvic multi-organ segmentation on transrectal ultrasound using anchor-free mask CNN. <i>Medical Physics</i> , <b>2021</b> , 48, 3055-3064	4.4	2
15	Artificial intelligence in tumor subregion analysis based on medical imaging: A review. <i>Journal of Applied Clinical Medical Physics</i> , <b>2021</b> , 22, 10-26	2.3	2
14	Automatic quantification of myocardium and pericardial fat from coronary computed tomography angiography: a multicenter study. <i>European Radiology</i> , <b>2021</b> , 31, 3826-3836	8	2
13	Learning-based automatic segmentation on arteriovenous malformations from contrast-enhanced CT images <b>2019</b> ,		1
12	Prostate and dominant intraprostatic lesion segmentation on PET/CT using cascaded regional-net. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	1
11	Self-supervised learning for accelerated 3D high-resolution ultrasound imaging. <i>Medical Physics</i> , <b>2021</b> , 48, 3916-3926	4.4	1
10	Learning-Based Stopping Power Mapping on Dual-Energy CT for Proton Radiation Therapy. <i>International Journal of Particle Therapy</i> , <b>2021</b> , 7, 46-60	1.5	1
9	Thyroid gland delineation in noncontrast-enhanced CT using deep convolutional neural networks. <i>Physics in Medicine and Biology</i> , <b>2020</b> ,	3.8	1
8	High through-plane resolution CT imaging with self-supervised deep learning. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	1
7	Dosimetric Uncertainties in Dominant Intraprostatic Lesion Simultaneous Boost Using Intensity Modulated Proton Therapy. <i>Advances in Radiation Oncology</i> , <b>2022</b> , 7, 100826	3.3	0
6	Synthetic CT-aided multiorgan segmentation for CBCT-guided adaptive pancreatic radiotherapy. <i>Medical Physics</i> , <b>2021</b> , 48, 7063-7073	4.4	0
5	Lung tumor segmentation in 4D CT images using motion convolutional neural networks. <i>Medical Physics</i> , <b>2021</b> , 48, 7141-7153	4.4	0
4	Catheter position prediction using deep-learning-based multi-atlas registration for high-dose rate prostate brachytherapy. <i>Medical Physics</i> , <b>2021</b> , 48, 7261-7270	4.4	0
3	Generative adversarial networks for medical image synthesis <b>2022</b> , 105-128		0
2	Machine learning for tracking planned versus delivered dose in pancreas SBRT.. <i>Journal of Clinical Oncology</i> , <b>2022</b> , 40, 561-561	2.2	
1	MRI classification using semantic random forest with auto-context model. <i>Quantitative Imaging in Medicine and Surgery</i> , <b>2021</b> , 11, 4753-4766	3.6	

