Tonghe Wang

List of Publications by Year
in descending order

101 papers	3,636 citations	159525 30 h-index	149623 56 g-index
101 all docs	101 docs citations	101 times ranked	2612 citing authors

#	Article	IF	Citations
1	Deep learning in medical image registration: a review. Physics in Medicine and Biology, 2020, 65, 20TR01.	1.6	330
2	Automatic multiorgan segmentation in thorax <scp>CT</scp> images using U‑net‑<scp>GAN</scp>. Medical Physics, 2019, 46, 2157-2168.	1.6	200
3	MRI‑only based synthetic CT generation using dense cycle consistent generative adversarial networks. Medical Physics, 2019, 46, 3565-3581.	1.6	181
4	Paired cycle‑GAN‑based image correction for quantitative cone‑beam computed tomography. Medical Physics, 2019, 46, 3998-4009.	1.6	164
5	Deeply supervised 3D fully convolutional networks with group dilated convolution for automatic <scp>MRI</scp> prostate segmentation. Medical Physics, 2019, 46, 1707-1718.	1.6	151
6	A review on medical imaging synthesis using deep learning and its clinical applications. Journal of Applied Clinical Medical Physics, 2021, 22, 11-36.	0.8	139
7	CBCT‑based synthetic CT generation using deep‑attention cycleGAN for pancreatic adaptive radiotherapy. Medical Physics, 2020, 47, 2472-2483.	1.6	113
8	A review of deep learning based methods for medical image multi-organ segmentation. Physica Medica, 2021, 85, 107-122.	0.4	103
9	Synthetic MRI-aided multi-organ segmentation on male pelvic CT using cycle consistent deep attention network. Radiotherapy and Oncology, 2019, 141, 192-199.	0.3	97
10	Deep learning-based attenuation correction in the absence of structural information for whole-body positron emission tomography imaging. Physics in Medicine and Biology, 2020, 65, 055011.	1.6	97
11	Ultrasound prostate segmentation based on multidirectional deeply supervised V‑Net. Medical Physics, 2019, 46, 3194-3206.	1.6	96
12	Synthetic CT generation from non-attenuation corrected PET images for whole-body PET imaging. Physics in Medicine and Biology, 2019, 64, 215016.	1.6	81
13	A learning-based automatic segmentation and quantification method on left ventricle in gated myocardial perfusion SPECT imaging: A feasibility study. Journal of Nuclear Cardiology, 2020, 27, 976-987.	1.4	72
14	Breast tumor segmentation in 3D automatic breast ultrasound using Mask scoring R‑CNN. Medical Physics, 2021, 48, 204-214.	1.6	68
15	Machine learning in quantitative PET: A review of attenuation correction and low-count image reconstruction methods. Physica Medica, 2020, 76, 294-306.	0.4	67
16	CT prostate segmentation based on synthetic MRI‑aided deep attention fully convolution network. Medical Physics, 2020, 47, 530-540.	1.6	66
17	LungRegNet: An unsupervised deformable image registration method for 4D‑CT lung. Medical Physics, 2020, 47, 1763-1774.	1.6	66
18	Whole-body PET estimation from low count statistics using cycle-consistent generative adversarial networks. Physics in Medicine and Biology, 2019, 64, 215017.	1.6	64

#	Article	IF	Citations
19	Male pelvic multi-organ segmentation aided by CBCT-based synthetic MRI. Physics in Medicine and Biology, 2020, 65, 035013.	1.6	58
20	MRI-based treatment planning for proton radiotherapy: dosimetric validation of a deep learning-based liver synthetic CT generation method. Physics in Medicine and Biology, 2019, 64, 145015.	1.6	53
21	MRI-based treatment planning for liver stereotactic body radiotherapy: validation of a deep learning-based synthetic CT generation method. British Journal of Radiology, 2019, 92, 20190067.	1.0	52
22	MRI-based treatment planning for brain stereotactic radiosurgery: Dosimetric validation of a learning-based pseudo-CT generation method. Medical Dosimetry, 2019, 44, 199-204.	0.4	51
23	4D-CT deformable image registration using multiscale unsupervised deep learning. Physics in Medicine and Biology, 2020, 65, 085003.	1.6	51
24	Evaluation of a deep learning-based pelvic synthetic CT generation technique for MRI-based prostate proton treatment planning. Physics in Medicine and Biology, 2019, 64, 205022.	1.6	45
25	MRI-based attenuation correction for brain PET/MRI based on anatomic signature and machine learning. Physics in Medicine and Biology, 2019, 64, 025001.	1.6	40
26	Learning–based automatic segmentation of arteriovenous malformations on contrast CT images in brain stereotactic radiosurgery. Medical Physics, 2019, 46, 3133-3141.	1.6	39
27	Noise suppression for dual-energy CT via penalized weighted least-square optimization with similarity-based regularization. Medical Physics, 2016, 43, 2676-2686.	1.6	37
28	Pelvic multi–organ segmentation on cone–beam CT for prostate adaptive radiotherapy. Medical Physics, 2020, 47, 3415-3422.	1.6	37
29	Learning–based <scp>CBCT</scp> correction using alternating random forest based on auto–context model. Medical Physics, 2019, 46, 601-618.	1.6	36
30	CT–based multi–organ segmentation using a 3D self–attention U–net network for pancreatic radiotherapy. Medical Physics, 2020, 47, 4316-4324.	1.6	35
31	Label-driven magnetic resonance imaging (MRI)-transrectal ultrasound (TRUS) registration using weakly supervised learning for MRI-guided prostate radiotherapy. Physics in Medicine and Biology, 2020, 65, 135002.	1.6	34
32	Biomechanically constrained non-rigid MR-TRUS prostate registration using deep learning based 3D point cloud matching. Medical Image Analysis, 2021, 67, 101845.	7.0	33
33	MRI-based pseudo CT synthesis using anatomical signature and alternating random forest with iterative refinement model. Journal of Medical Imaging, 2018, 5, 1.	0.8	33
34	MRI-based synthetic CT generation using semantic random forest with iterative refinement. Physics in Medicine and Biology, 2019, 64, 085001.	1.6	31
35	Head and neck multi–organ auto–segmentation on CT images aided by synthetic MRI. Medical Physics, 2020, 47, 4294-4302.	1.6	31
36	Multi-Needle Detection in 3D Ultrasound Images Using Unsupervised Order-Graph Regularized Sparse Dictionary Learning. IEEE Transactions on Medical Imaging, 2020, 39, 2302-2315.	5.4	31

#	ARTICLE	IF	CITATIONS
37	Dose evaluation of MRI-based synthetic CT generated using a machine learning method for prostate cancer radiotherapy. Medical Dosimetry, 2019, 44, e64-e70.	0.4	30
38	Multi‐needle Localization with Attention U‐Net in US‐guided HDR Prostate Brachytherapy. Medical Physics, 2020, 47, 2735-2745.	1.6	30
39	Head-and-neck organs-at-risk auto-delineation using dual pyramid networks for CBCT-guided adaptive radiotherapy. Physics in Medicine and Biology, 2021, 66, 045021.	1.6	29
40	Deformable MR‐CBCT prostate registration using biomechanically constrained deep learning networks. Medical Physics, 2021, 48, 253-263.	1.6	27
41	Intensity non-uniformity correction in MR imaging using residual cycle generative adversarial network. Physics in Medicine and Biology, 2020, 65, 215025.	1.6	27
42	Dual energy CT with one full scan and a second sparse-view scan using structure preserving iterative reconstruction (SPIR). Physics in Medicine and Biology, 2016, 61, 6684-6706.	1.6	25
43	Automatic multi‐catheter detection using deeply supervised convolutional neural network in MRI‐guided HDR prostate brachytherapy. Medical Physics, 2020, 47, 4115-4124.	1.6	24
44	MRI-Based Proton Treatment Planning for Base of Skull Tumors. International Journal of Particle Therapy, 2019, 6, 12-25.	0.9	24
45	Automated left ventricular myocardium segmentation using 3D deeply supervised attention U‐net for coronary computed tomography angiography; CT myocardium segmentation. Medical Physics, 2020, 47, 1775-1785.	1.6	23
46	Automatic segmentation and quantification of epicardial adipose tissue from coronary computed tomography angiography. Physics in Medicine and Biology, 2020, 65, 095012.	1.6	23
47	Deep learning-based image quality improvement for low-dose computed tomography simulation in radiation therapy. Journal of Medical Imaging, 2019, 6, 1.	0.8	23
48	Optimal virtual monoenergetic image in "TwinBeam"‐dual‐energy <scp>CT</scp> for organs‐at‐risk delineation based on contrast‐noise‐ratio in head‐and‐neck radiotherapy. Journal of Applied Clinical Medical Physics, 2019, 20, 121-128.	0.8	21
49	Cone‐beam CT‐derived relative stopping power map generation via deep learning for proton radiotherapy. Medical Physics, 2020, 47, 4416-4427.	1.6	21
50	Automated delineation of head and neck organs at risk using synthetic MRI‐aided mask scoring regional convolutional neural network. Medical Physics, 2021, 48, 5862-5873.	1.6	21
51	Deep learning-based real-time volumetric imaging for lung stereotactic body radiation therapy: a proof of concept study. Physics in Medicine and Biology, 2020, 65, 235003.	1.6	21
52	Dosimetric study on learning-based cone-beam CT correction in adaptive radiation therapy. Medical Dosimetry, 2019, 44, e71-e79.	0.4	20
53	Multiparametric MRI-guided dose boost to dominant intraprostatic lesions in CT-based High-dose-rate prostate brachytherapy. British Journal of Radiology, 2019, 92, 20190089.	1.0	20
54	Synthetic dual-energy CT for MRI-only based proton therapy treatment planning using label-GAN. Physics in Medicine and Biology, 2021, 66, 065014.	1.6	18

#	Article	IF	Citations
55	Automatic multi-needle localization in ultrasound images using large margin mask RCNN for ultrasound-guided prostate brachytherapy. Physics in Medicine and Biology, 2020, 65, 205003.	1.6	18
56	A planning study of focal dose escalations to multiparametric MRI-defined dominant intraprostatic lesions in prostate proton radiation therapy. British Journal of Radiology, 2020, 93, 20190845.	1.0	15
57	Artificial intelligence in tumor subregion analysis based on medical imaging: A review. Journal of Applied Clinical Medical Physics, 2021, 22, 10-26.	0.8	15
58	Magnetic resonance imaging-based pseudo computed tomography using anatomic signature and joint dictionary learning. Journal of Medical Imaging, 2018, 5, 1.	0.8	15
59	Dual-energy CT based mass density and relative stopping power estimation for proton therapy using physics-informed deep learning. Physics in Medicine and Biology, 2022, 67, 115010.	1.6	14
60	A preliminary study on a multiresolution-level inverse planning approach for Gamma Knife radiosurgery. Medical Physics, 2020, 47, 1523-1532.	1.6	13
61	Magnetic resonance imaging contrast enhancement synthesis using cascade networks with local supervision. Medical Physics, 2022, 49, 3278-3287.	1.6	13
62	Learning-based dose prediction for pancreatic stereotactic body radiation therapy using dual pyramid adversarial network. Physics in Medicine and Biology, 2021, 66, 125019.	1.6	12
63	Automated prostate segmentation of volumetric CT images using 3D deeply supervised dilated FCN. , 2019, , .		12
64	Male pelvic multi-organ segmentation on transrectal ultrasound using anchor-free mask CNN. Medical Physics, 2021, 48, 3055-3064.	1.6	11
65	Multi-organ auto-delineation in head-and-neck MRI for radiation therapy using regional convolutional neural network. Physics in Medicine and Biology, 2022, 67, 025006.	1.6	11
66	Prostate and dominant intraprostatic lesion segmentation on PET/CT using cascaded regional-net. Physics in Medicine and Biology, 2021, 66, 245006.	1.6	10
67	Male pelvic CT multi-organ segmentation using synthetic MRI-aided dual pyramid networks. Physics in Medicine and Biology, 2021, 66, 085007.	1.6	9
68	Head and neck multi-organ segmentation on dual-energy CT using dual pyramid convolutional neural networks. Physics in Medicine and Biology, 2021, 66, 115008.	1.6	9
69	4D-CT Deformable Image Registration Using an Unsupervised Deep Convolutional Neural Network. Lecture Notes in Computer Science, 2019, , 26-33.	1.0	9
70	Improving image quality of cone-beam CT using alternating regression forest. , 2018, 10573, .		9
71	Learning-based synthetic dual energy CT imaging from single energy CT for stopping power ratio calculation in proton radiation therapy. British Journal of Radiology, 2022, 95, 20210644.	1.0	9
72	High through-plane resolution CT imaging with self-supervised deep learning. Physics in Medicine and Biology, 2021, 66, 145013.	1.6	8

#	Article	IF	Citations
73	MRI-based synthetic CT generation using deep convolutional neural network. , 2019, , .		8
74	Synthetic CTâ€guided multiorgan segmentation for CBCTâ€guided adaptive pancreatic radiotherapy. Medical Physics, 2021, 48, 7063-7073.	1.6	8
75	Selfâ€supervised learning for accelerated 3D highâ€resolution ultrasound imaging. Medical Physics, 2021, 48, 3916-3926.	1.6	7
76	Lung tumor segmentation in 4D CT images using motion convolutional neural networks. Medical Physics, 2021, 48, 7141-7153.	1.6	7
77	CBCT-Based Synthetic MRI Generation for CBCT-Guided Adaptive Radiotherapy. Lecture Notes in Computer Science, 2019, , 154-161.	1.0	7
78	Deep attentional GAN-based high-resolution ultrasound imaging. , 2020, , .		7
79	MRIâ€based prostate and dominant lesion segmentation using cascaded scoring convolutional neural network. Medical Physics, 2022, 49, 5216-5224.	1.6	7
80	Pixel-wise estimation of noise statistics on iterative CT reconstruction from a single scan. Medical Physics, 2017, 44, 3525-3533.	1.6	6
81	Automatic quantification of myocardium and pericardial fat from coronary computed tomography angiography: a multicenter study. European Radiology, 2021, 31, 3826-3836.	2.3	6
82	Image quality improvement in cone-beam CT using deep learning. , 2019, , .		6
83	Learning-Based Stopping Power Mapping on Dual-Energy CT for Proton Radiation Therapy. International Journal of Particle Therapy, 2021, 7, 46-60.	0.9	5
84	Ultrasound prostate segmentation based on 3D V-Net with deep supervision. , 2019, , .		5
85	Dosimetric Uncertainties in Dominant Intraprostatic Lesion Simultaneous Boost Using Intensity Modulated Proton Therapy. Advances in Radiation Oncology, 2022, 7, 100826.	0.6	5
86	Synthesizing highâ€resolution magnetic resonance imaging using parallel cycleâ€consistent generative adversarial networks for fast magnetic resonance imaging. Medical Physics, 2022, 49, 357-369.	1.6	5
87	Noise suppression for energy-resolved CT using similarity-based non-local filtration. Proceedings of SPIE, 2016, , .	0.8	4
88	Image-domain non-uniformity correction for cone-beam CT. , 2017, , .		4
89	Thyroid gland delineation in noncontrast-enhanced CTs using deep convolutional neural networks. Physics in Medicine and Biology, 2021, 66, 055007.	1.6	3
90	Catheter position prediction using deepâ€learningâ€based multiâ€atlas registration for highâ€dose rate prostate brachytherapy. Medical Physics, 2021, 48, 7261-7270.	1.6	3

#	ARTICLE	IF	CITATIONS
91	A denoising algorithm for CT image using low-rank sparse coding. , 2018, 10574, .		3
92	Generative adversarial networks for medical image synthesis. , 2022, , 105-128.		3
93	Mask R-CNN-based tumor localization and segmentation in 4D Lung CT. , 2021, , .		2
94	Automatic inverse treatment planning of Gamma Knife radiosurgery via deep reinforcement learning. Medical Physics, 2022, 49, 2877-2889.	1.6	2
95	MRI classification using semantic random forest with auto-context model. Quantitative Imaging in Medicine and Surgery, 2021, 11, 4753-4766.	1.1	1
96	Learning-based automatic segmentation on arteriovenous malformations from contract-enhanced CT images. , 2019, , .		1
97	MRI-based pseudo CT generation using classification and regression random forest. , 2019, , .		0
98	A learning-based automatic segmentation method on left ventricle in SPECT imaging. , 2019, , .		0
99	Machine learning for tracking planned versus delivered dose in pancreas SBRT.. Journal of Clinical Oncology, 2022, 40, 561-561.	0.8	0
100	Neurovascular bundles segmentation on MRI via hierarchical object activation network. , 2022, , .		0
101	Deep learning based volume-to-slice MRI registration via intentional overfitting. , 2022, , .		0