Lei Ren

List of Publications by Year
in descending order

49 papers	878 citations	516215 16 h-index	500791 28 g-index
49 all docs	49 docs citations	49 times ranked	749 citing authors

#	Article	IF	Citations
1	A technique for estimating 4Dâ€CBCT using prior knowledge and limitedâ€angle projections. Medical Physics, 2013, 40, 121701.	1.6	74
2	Clinical implementation of AI technologies will require interpretable AI models. Medical Physics, 2020, 47, 1-4.	1.6	63
3	A multi-scale framework with unsupervised joint training of convolutional neural networks for pulmonary deformable image registration. Physics in Medicine and Biology, 2020, 65, 015011.	1.6	60
4	A limitedâ€angle intrafraction verification (LIVE) system for radiation therapy. Medical Physics, 2014, 41, 020701.	1.6	54
5	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
6	Augmentation of CBCT Reconstructed From Under-Sampled Projections Using Deep Learning. IEEE Transactions on Medical Imaging, 2019, 38, 2705-2715.	5.4	52
7	Preliminary clinical evaluation of a 4D-CBCT estimation technique using prior information and limited-angle projections. Radiotherapy and Oncology, 2015, 115, 22-29.	0.3	48
8	SPARE: Sparseâ€view reconstruction challenge for 4D coneâ€beam CT from a 1â€min scan. Medical Physics, 2019, 46, 3799-3811.	1.6	47
9	A Technique for Generating Volumetric Cine-Magnetic Resonance Imaging. International Journal of Radiation Oncology Biology Physics, 2016, 95, 844-853.	0.4	46
10	Automatic registration between reference and on-board digital tomosynthesis images for positioning verification. Medical Physics, 2008, 35, 664-672.	1.6	27
11	Feasibility study of a synchronizedâ€movingâ€grid (SMOG) system to improve image quality in coneâ€beam computed tomography (CBCT). Medical Physics, 2012, 39, 5099-5110.	1.6	27
12	Intensity non-uniformity correction in MR imaging using residual cycle generative adversarial network. Physics in Medicine and Biology, 2020, 65, 215025.	1.6	27
13	Dosimetric verification of lung cancer treatment using the CBCTs estimated from limitedâ€angle onâ€board projections. Medical Physics, 2015, 42, 4783-4795.	1.6	24
14	Low dose CBCT reconstruction via prior contour based total variation (PCTV) regularization: a feasibility study. Physics in Medicine and Biology, 2018, 63, 085014.	1.6	24
15	Estimating 4Dâ€<scp>CBCT</scp> from prior information and extremely limited angle projections using structural <scp>PCA</scp> and weighted freeâ€form deformation for lung radiotherapy. Medical Physics, 2017, 44, 1089-1104.	1.6	22
16	Reducing scan angle using adaptive prior knowledge for a limited-angle intrafraction verification (LIVE) system for conformal arc radiotherapy. Physics in Medicine and Biology, 2017, 62, 3859-3882.	1.6	21
17	Enhancing digital tomosynthesis (DTS) for lung radiotherapy guidance using patient-specific deep learning model. Physics in Medicine and Biology, 2021, 66, 035009.	1.6	17
18	The markerless lung target tracking AAPM Grand Challenge (MATCH) results. Medical Physics, 2022, 49, 1161-1180.	1.6	15

#	Article	IF	Citations
19	Scatter Reduction and Correction for Dual-Source Cone-Beam CT Using Prepatient Grids. Technology in Cancer Research and Treatment, 2016, 15, 416-427.	0.8	14
20	Dual-Intended Deep Learning Model for Breast Cancer Diagnosis in Ultrasound Imaging. Cancers, 2022, 14, 2663.	1.7	14
21	Image acquisition optimization of a limited-angle intrafraction verification (LIVE) system for lung radiotherapy. Medical Physics, 2018, 45, 340-351.	1.6	13
22	Volumetric cine magnetic resonance imaging (VC-MRI) using motion modeling, free-form deformation and multi-slice undersampled 2D cine MRI reconstructed with spatio-temporal low-rank decomposition. Quantitative Imaging in Medicine and Surgery, 2020, 10, 432-450.	1.1	12
23	Principal component reconstruction (<scp>PCR</scp>) for cine <scp>CBCT</scp> with motion learning from 2D fluoroscopy. Medical Physics, 2018, 45, 167-177.	1.6	11
24	A Novel method to generate onâ€board 4D MRI using prior 4D MRI and onâ€board kV projections from a conventional LINAC for target localization in liver SBRT. Medical Physics, 2018, 45, 3238-3245.	1.6	11
25	Development of realistic multi-contrast textured XCAT (MT-XCAT) phantoms using a dual-discriminator conditional-generative adversarial network (D-CGAN). Physics in Medicine and Biology, 2020, 65, 065009.	1.6	11
26	4D radiomics: impact of 4D-CBCT image quality on radiomic analysis. Physics in Medicine and Biology, 2021, 66, 045023.	1.6	9
27	Respiratory deformation registration in 4D-CT/cone beam CT using deep learning. Quantitative Imaging in Medicine and Surgery, 2021, 11, 737-748.	1.1	9
28	Enhancing liver tumor localization accuracy by prior-knowledge-guided motion modeling and a biomechanical model. Quantitative Imaging in Medicine and Surgery, 2019, 9, 1337-1349.	1.1	8
29	Building a patient-specific model using transfer learning for four-dimensional cone beam computed tomography augmentation. Quantitative Imaging in Medicine and Surgery, 2021, 11, 540-555.	1.1	7
30	Development of a Computerized 4-D MRI Phantom for Liver Motion Study. Technology in Cancer Research and Treatment, 2017, 16, 1051-1059.	0.8	6
31	Low dose cone-beam computed tomography reconstruction via hybrid prior contour based total variation regularization (hybrid-PCTV). Quantitative Imaging in Medicine and Surgery, 2019, 9, 1214-1228.	1.1	6
32	A geometry-guided deep learning technique for CBCT reconstruction. Physics in Medicine and Biology, 2021, 66, 15LT01.	1.6	6
33	Clinical Study of Orthogonal-View Phase-Matched Digital Tomosynthesis for Lung Tumor Localization. Technology in Cancer Research and Treatment, 2017, 16, 866-878.	0.8	5
34	Multiâ€Contrast Fourâ€dimensional Magnetic Resonance Imaging (MCâ€4Dâ€MRI): development and initial evaluation in liver tumor patients. Medical Physics, 2021, 48, 7984.	1.6	5
35	Prior image-guided cone-beam computed tomography augmentation from under-sampled projections using a convolutional neural network. Quantitative Imaging in Medicine and Surgery, 2021, 11, 4767-4780.	1.1	4
36	Patient-specific deep learning model to enhance 4D-CBCT image for radiomics analysis. Physics in Medicine and Biology, 2022, 67, 085003.	1.6	4

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37	Fast fourâ€dimensional coneâ€beam computed tomography reconstruction using deformable convolutional networks. Medical Physics, 2022, 49, 6461-6476.	1.6	4
38	Monte Carlo analysis of beam blocking grid design parameters: Scatter estimation and the importance of electron backscatter. Medical Physics, 2018, 45, 1059-1070.	1.6	3
39	Daily edge deformation prediction using an unsupervised convolutional neural network model for low dose prior contour based total variation CBCT reconstruction (PCTV-CNN). Biomedical Physics and Engineering Express, 2019, 5, 065013.	0.6	3
40	Enhancement of 4-D Cone-Beam Computed Tomography (4D-CBCT) Using a Dual-Encoder Convolutional Neural Network (DeCNN). IEEE Transactions on Radiation and Plasma Medical Sciences, 2022, 6, 222-230.	2.7	3
41	A geometry-guided multi-beamlet deep learning technique for CT reconstruction. Biomedical Physics and Engineering Express, 2022, 8, 045004.	0.6	3
42	Real-Time Markerless Tracking of Lung Tumors Based on 2-D Fluoroscopy Imaging Using Convolutional LSTM. IEEE Transactions on Radiation and Plasma Medical Sciences, 2022, 6, 189-199.	2.7	2
43	Prostate-specific membrane antigen PET response associates with radiographic progression-free survival following stereotactic ablative radiation therapy in oligometastatic castration-sensitive prostate cancer.. Journal of Clinical Oncology, 2022, 40, 5011-5011.	0.8	2
44	An interprojection sensor fusion approach to estimate blocked projection signal in synchronized moving grid-based CBCT system. Medical Physics, 2015, 43, 268-278.	1.6	1
45	Sensitivity of 3D Dose Verification to Multileaf Collimator Misalignments in Stereotactic Body Radiation Therapy of Spinal Tumor. Technology in Cancer Research and Treatment, 2016, 15, NP25-NP34.	0.8	1
46	Markerless Four-Dimensional-Cone Beam Computed Tomography Projection-Phase Sorting Using Prior Knowledge and Patient Motion Modeling: A Feasibility Study. Cancer Translational Medicine, 2017, 3, 185-193.	0.2	1
47	Dosimetric Analysis of Microscopic Disease in SBRT for Lung Cancers. Technology in Cancer Research and Treatment, 2017, 16, 1113-1119.	0.8	0
48	Technical Note: Imaging dose resulting from optimized procedures with limitedâ€angle intrafractional verification system during stereotactic body radiation therapy lung treatment. Medical Physics, 2019, 46, 2709-2715.	1.6	0
49	Patientâ€specific synthetic magnetic resonance imaging generation from cone beam computed tomography for image guidance in liver stereotactic body radiation therapy. Precision Radiation Oncology, 2022, 6, 110-118.	0.4	0