Ke Sheng

List of Publications by Year
in descending order

82 papers	1,812 citations	236925 25 h-index	315739 38 g-index
83 all docs	83 docs citations	83 times ranked	1986 citing authors

#	Article	IF	Citations
1	Fully automatic multi‐organ segmentation for head and neck cancer radiotherapy using shape representation model constrained fully convolutional neural networks. Medical Physics, 2018, 45, 4558-4567.	3.0	164
2	Longitudinal diffusion MRI for treatment response assessment: Preliminary experience using an MRI‐guided tri‐cobalt 60 radiotherapy system. Medical Physics, 2016, 43, 1369-1373.	3.0	95
3	Correlation of Gleason Scores with Diffusion-Weighted Imaging Findings of Prostate Cancer. Advances in Urology, 2012, 2012, 1-5.	1.3	67
4	Treatment planning comparison of IMPT, VMAT and 4π radiotherapy for prostate cases. Radiation Oncology, 2017, 12, 10.	2.7	67
5	4π Noncoplanar Stereotactic Body Radiation Therapy for Head-and-Neck Cancer: Potential to Improve Tumor Control and Late Toxicity. International Journal of Radiation Oncology Biology Physics, 2015, 91, 401-409.	0.8	62
6	The development and verification of a highly accurate collision prediction model for automated noncoplanar plan delivery. Medical Physics, 2015, 42, 6457-6467.	3.0	53
7	Respiratory motion-resolved, self-gated 4D-MRI using rotating cartesian k-space (ROCK). Medical Physics, 2017, 44, 1359-1368.	3.0	51
8	Shape constrained fully convolutional DenseNet with adversarial training for multiorgan segmentation on head and neck <scp>CT</scp> and low‐field <scp>MR</scp> images. Medical Physics, 2019, 46, 2669-2682.	3.0	51
9	Denoised and texture enhanced MVCT to improve soft tissue conspicuity. Medical Physics, 2014, 41, 101916.	3.0	49
10	Integrated beam orientation and scanning‐spot optimization in intensity‐modulated proton therapy for brain and unilateral head and neck tumors. Medical Physics, 2018, 45, 1338-1350.	3.0	45
11	Viability of Noncoplanar VMAT for liver SBRT compared with coplanar VMAT and beam orientation optimized 4π IMRT. Advances in Radiation Oncology, 2016, 1, 67-75.	1.2	43
12	Feasibility evaluation of diffusion-weighted imaging using an integrated MRI-radiotherapy system for response assessment to neoadjuvant therapy in rectal cancer. British Journal of Radiology, 2017, 90, 20160739.	2.2	43
13	Feasibility of extreme dose escalation for glioblastoma multiforme using 4π radiotherapy. Radiation Oncology, 2014, 9, 239.	2.7	42
14	Feasibility of prostate robotic radiation therapy on conventional C-arm linacs. Practical Radiation Oncology, 2014, 4, 254-260.	2.1	38
15	Radioresistance of the breast tumor is highly correlated to its level of cancer stem cell and its clinical implication for breast irradiation. Radiotherapy and Oncology, 2017, 124, 455-461.	0.6	37
16	A Prospective 4π Radiation Therapy Clinical Study in Recurrent High-Grade Glioma Patients. International Journal of Radiation Oncology Biology Physics, 2018, 101, 144-151.	0.8	36
17	Automatic detection and segmentation of multiple brain metastases on magnetic resonance image using asymmetric UNet architecture. Physics in Medicine and Biology, 2021, 66, 015003.	3.0	34
18	Incorporating Cancer Stem Cells in Radiation Therapy Treatment Response Modeling and the Implication in Glioblastoma Multiforme Treatment Resistance. International Journal of Radiation Oncology Biology Physics, 2015, 91, 866-875.	0.8	31

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19	A treatment planning comparison between modulated tri-cobalt-60 teletherapy and linear accelerator–based stereotactic body radiotherapy for central early-stage non–small cell lung cancer. Medical Dosimetry, 2016, 41, 87-91.	0.9	31
20	Self-channel-and-spatial-attention neural network for automated multi-organ segmentation on head and neck CT images. Physics in Medicine and Biology, 2020, 65, 245034.	3.0	31
21	Magnetic resonance imaging-guided stereotactic body radiotherapy for prostate cancer (mirage): a phase iii randomized trial. BMC Cancer, 2021, 21, 538.	2.6	29
22	Feasibility of magnetic resonance imaging–guided liver stereotactic body radiation therapy: A comparison between modulated tri-cobalt-60 teletherapy and linear accelerator–based intensity modulated radiation therapy. Practical Radiation Oncology, 2015, 5, 330-337.	2.1	28
23	Predicting liver SBRT eligibility and plan quality for VMAT and 4Ï€ plans. Radiation Oncology, 2017, 12, 70.	2.7	28
24	Robust beam orientation optimization for intensity‐modulated proton therapy. Medical Physics, 2019, 46, 3356-3370.	3.0	28
25	Multimodality image registration in the head‐and‐neck using a deep learning‐derived synthetic CT as a bridge. Medical Physics, 2020, 47, 1094-1104.	3.0	28
26	A novel energy layer optimization framework for spot‐scanning proton arc therapy. Medical Physics, 2020, 47, 2072-2084.	3.0	27
27	Dose domain regularization of MLC leaf patterns for highly complex IMRT plans. Medical Physics, 2015, 42, 1858-1870.	3.0	23
28	DeepMC: a deep learning method for efficient Monte Carlo beamlet dose calculation by predictive denoising in magnetic resonance-guided radiotherapy. Physics in Medicine and Biology, 2021, 66, 035022.	3.0	23
29	Integral dose investigation of non-coplanar treatment beam geometries in radiotherapy. Medical Physics, 2013, 41, 011905.	3.0	21
30	Dosimetric impact of interfraction prostate and seminal vesicle volume changes and rotation: A post-hoc analysis of a phase III randomized trial of MRI-guided versus CT-guided stereotactic body radiotherapy. Radiotherapy and Oncology, 2022, 167, 203-210.	0.6	20
31	Respiratory motion-resolved, self-gated 4D-MRI using Rotating Cartesian K-space (ROCK): Initial clinical experience on an MRI-guided radiotherapy system. Radiotherapy and Oncology, 2018, 127, 467-473.	0.6	19
32	Accuracy of UTE-MRI-based patient setup for brain cancer radiation therapy. Medical Physics, 2015, 43, 262-267.	3.0	18
33	4π plan optimization for cortical-sparing brain radiotherapy. Radiotherapy and Oncology, 2018, 127, 128-135.	0.6	18
34	A computer simulated phantom study of tomotherapy dose optimization based on probability density functions (PDF) and potential errors caused by low reproducibility of PDF. Medical Physics, 2006, 33, 3321-3326.	3.0	17
35	A comprehensive formulation for volumetric modulated arc therapy planning. Medical Physics, 2016, 43, 4263-4272.	3.0	17
36	Artificial intelligence in radiotherapy: a technological review. Frontiers of Medicine, 2020, 14, 431-449.	3.4	17

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37	3D Dose Verification Using Tomotherapy CT Detector Array. International Journal of Radiation Oncology Biology Physics, 2012, 82, 1013-1020.	0.8	16
38	Accelerating Dynamic Magnetic Resonance Imaging (MRI) for Lung Tumor Tracking Based on Low-Rank Decomposition in the Spatial–Temporal Domain: A Feasibility Study Based on Simulation and Preliminary Prospective Undersampled MRI. International Journal of Radiation Oncology Biology Physics, 2014, 88, 723-731.	0.8	16
39	Near Real-Time Assessment of Anatomic and Dosimetric Variations for Head and Neck Radiation Therapy via Graphics Processing Unit–based Dose Deformation Framework. International Journal of Radiation Oncology Biology Physics, 2015, 92, 415-422.	0.8	16
40	Noncoplanar beams improve dosimetry quality for extracranial intensity modulated radiotherapy and should be used more extensively. Medical Physics, 2015, 42, 531-533.	3.0	15
41	<scp>VMAT</scp> optimization with dynamic collimator rotation. Medical Physics, 2018, 45, 2399-2410.	3.0	15
42	Linear energy transfer weighted beam orientation optimization for intensity‐modulated proton therapy. Medical Physics, 2021, 48, 57-70.	3.0	15
43	Computerized triplet beam orientation optimization for MRI‐guided Co‐60 radiotherapy. Medical Physics, 2016, 43, 5667-5675.	3.0	14
44	A novel software and conceptual design of the hardware platform for intensity modulated radiation therapy. Medical Physics, 2016, 43, 917-929.	3.0	14
45	Robust optimization for intensity‐modulated proton therapy with soft spot sensitivity regularization. Medical Physics, 2019, 46, 1408-1425.	3.0	13
46	Analysis of Geometric Performance and Dosimetric Impact of Using Automatic Contour Segmentation for Radiotherapy Planning. Frontiers in Oncology, 2020, 10, 1762.	2.8	13
47	Feasibility of automated 3-dimensional magnetic resonance imaging pancreas segmentation. Advances in Radiation Oncology, 2016, 1, 182-193.	1.2	12
48	Deterministic direct aperture optimization using multiphase piecewise constant segmentation. Medical Physics, 2017, 44, 5596-5609.	3.0	12
49	Practical Safety Considerations for Integration of Magnetic Resonance Imaging in Radiation Therapy. Practical Radiation Oncology, 2020, 10, 443-453.	2.1	12
50	Feasibility of using intermediate x-ray energies for highly conformal extracranial radiotherapy. Medical Physics, 2014, 41, 041709.	3.0	11
51	Cochlea-sparing acoustic neuroma treatment with 4π radiation therapy. Advances in Radiation Oncology, 2018, 3, 100-107.	1.2	11
52	Parallel beamlet dose calculation via beamlet contexts in a distributed multi‐GPU framework. Medical Physics, 2019, 46, 3719-3733.	3.0	11
53	Interfractional Geometric Variations and Dosimetric Benefits of Stereotactic MRI Guided Online Adaptive Radiotherapy (SMART) of Prostate Bed after Radical Prostatectomy: Post-Hoc Analysis of a Phase II Trial. Cancers, 2021, 13, 2802.	3.7	11
54	Evaluation of T2-Weighted MRI for Visualization and Sparing of Urethra with MR-Guided Radiation Therapy (MRgRT) On-Board MRI. Cancers, 2021, 13, 3564.	3.7	11

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55	Technical Note: Iterative megavoltage CT (MVCT) reconstruction using block‐matching 3D‐transform () Tj ETQg1 1 0.784314 rgB	3.0	10
56	A sparse orthogonal collimator for small animal intensity‐modulated radiation therapy. Part II: hardware development and commissioning. Medical Physics, 2019, 46, 5733-5747.	3.0	10
57	Performance Comparison of Knowledge-Based Dose Prediction Techniques Based on Limited Patient Data. Technology in Cancer Research and Treatment, 2018, 17, 153303381881115.	1.9	9
58	Automated Non-Coplanar VMAT for Dose Escalation in Recurrent Head and Neck Cancer Patients. Cancers, 2021, 13, 1910.	3.7	9
59	Imaging dose management using multi-resolution in CT-guided radiation therapy. Physics in Medicine and Biology, 2005, 50, 1205-1219.	3.0	8
60	Correlation of Clinical and Dosimetric Parameters With Radiographic Lung Injury Following Stereotactic Body Radiotherapy. Technology in Cancer Research and Treatment, 2015, 14, 411-418.	1.9	8
61	Nonlocal Means Denoising of Self-Gated and k-Space Sorted 4-Dimensional Magnetic Resonance Imaging Using Block-Matching and 3-Dimensional Filtering: Implications for Pancreatic Tumor Registration and Segmentation. International Journal of Radiation Oncology Biology Physics, 2016, 95, 1058-1066.	0.8	8
62	ROAD: ROtational direct Aperture optimization with a Decoupled ring-collimator for FLASH radiotherapy. Physics in Medicine and Biology, 2021, 66, 035020.	3.0	8
63	Treating Glioblastoma Multiforme (GBM) with super hyperfractionated radiation therapy: Implication of temporal dose fractionation optimization including cancer stem cell dynamics. PLoS ONE, 2021, 16, e0245676.	2.5	8
64	A sparse orthogonal collimator for small animal intensity‐modulated radiation therapy part I: Planning system development and commissioning. Medical Physics, 2019, 46, 5703-5713.	3.0	7
65	Automated 4ï€ radiotherapy treatment planning with evolving knowledge‐base. Medical Physics, 2019, 46, 3833-3843.	3.0	7
66	Multi-task edge-recalibrated network for male pelvic multi-organ segmentation on CT images. Physics in Medicine and Biology, 2021, 66, 035001.	3.0	6
67	Image-domain multimaterial decomposition for dual-energy computed tomography with nonconvex sparsity regularization. Journal of Medical Imaging, 2019, 6, 1.	1.5	6
68	Systematic feasibility analysis of a quantitative elasticity estimation for breast anatomy using supine/prone patient postures. Medical Physics, 2016, 43, 1299-1311.	3.0	5
69	A Prospective Phase II Study of Automated Non-Coplanar VMAT for Recurrent Head and Neck Cancer: Initial Report of Feasibility, Safety, and Patient-Reported Outcomes. Cancers, 2022, 14, 939.	3.7	5
70	Reformulated McNamara RBE‐weighted beam orientation optimization for intensity modulated proton therapy. Medical Physics, 2022, 49, 2136-2149.	3.0	5
71	Lung dynamic MRI deblurring using low‐rank decomposition and dictionary learning. Medical Physics, 2015, 42, 1917-1925.	3.0	3
72	Fraction‐variant beam orientation optimization for intensity‐modulated proton therapy. Medical Physics, 2020, 47, 3826-3834.	3.0	3

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73	Weak Magnetic Fields Enhance the Efficacy of Radiation Therapy. Advances in Radiation Oncology, 2021, 6, 100645.	1.2	3
74	Clinical assessment of geometric distortion for a 0.35T MR‑guided radiotherapy system. Journal of Applied Clinical Medical Physics, 2021, 22, 303-309.	1.9	3
75	Fixed Beamline Optimization for Intensity Modulated Carbon-Ion Therapy. IEEE Transactions on Radiation and Plasma Medical Sciences, 2022, 6, 288-293.	3.7	2
76	Quantitative Characterization of Tumor Proximity to Stem Cell Niches: Implications on Recurrence and Survival in GBM Patients. International Journal of Radiation Oncology Biology Physics, 2021, 110, 1180-1188.	0.8	2
77	Bladder surface dose modeling in prostate cancer radiotherapy: An analysis of motion‑induced variations and the cumulative dose across the treatment. Medical Physics, 2021, 48, 8024-8036.	3.0	2
78	Voxelwise Prediction of Recurrent High-Grade Glioma via Proximity Estimation–Coupled Multidimensional Support Vector Machine. International Journal of Radiation Oncology Biology Physics, 2022, 112, 1279-1287.	0.8	2
79	A career path for pure academic medical physicists in radiation oncology should be established. Medical Physics, 2018, 45, 2853-2856.	3.0	1
80	Response to "in regard to "Tran A, Zhang J, Woods K, Yu V, Nguyen D, Gustafson G, Rosen L, Sheng K. Treatment planning comparison of IMPT, VMAT and 4π radiotherapy for prostate cases"" Radiation Oncology, 2018, 13, 66.	2.7	1
81	Using neural networks to extend cropped medical images for deformable registration among images with differing scan extents. Medical Physics, 2021, 48, 4459-4471.	3.0	1
82	Technical Note: Robust individual thermoluminescence dosimeter tracking using optical fingerprinting. Medical Physics, 2020, 47, 267-271.	3.0	0