

Wei Liu

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

84
papers

1,977
citations

24
h-index

42
g-index

91
ext. papers

2,578
ext. citations

3.1
avg, IF

4.7
L-index

#	Paper	IF	Citations
84	Robust optimization of intensity modulated proton therapy. <i>Medical Physics</i> , 2012 , 39, 1079-91	4.4	221
83	Consensus Guidelines for Implementing Pencil-Beam Scanning Proton Therapy for Thoracic Malignancies on Behalf of the PTCOG Thoracic and Lymphoma Subcommittee. <i>International Journal of Radiation Oncology Biology Physics</i> , 2017 , 99, 41-50	4	111
82	Multifield optimization intensity modulated proton therapy for head and neck tumors: a translation to practice. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 89, 846-53	4	99
81	Effectiveness of robust optimization in intensity-modulated proton therapy planning for head and neck cancers. <i>Medical Physics</i> , 2013 , 40, 051711	4.4	96
80	Exploratory Study of 4D versus 3D Robust Optimization in Intensity Modulated Proton Therapy for Lung Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016 , 95, 523-533	4	78
79	Robust radiotherapy planning. <i>Physics in Medicine and Biology</i> , 2018 , 63, 22TR02	3.8	75
78	Helical magnetorotational instability in magnetized Taylor-Couette flow. <i>Physical Review E</i> , 2006 , 74, 056302	2.4	61
77	Influence of robust optimization in intensity-modulated proton therapy with different dose delivery techniques. <i>Medical Physics</i> , 2012 , 39, 3089-101	4.4	60
76	Preliminary evaluation of multifield and single-field optimization for the treatment planning of spot-scanning proton therapy of head and neck cancer. <i>Medical Physics</i> , 2013 , 40, 081709	4.4	57
75	PTV-based IMPT optimization incorporating planning risk volumes vs robust optimization. <i>Medical Physics</i> , 2013 , 40, 021709	4.4	57
74	Impact of respiratory motion on worst-case scenario optimized intensity modulated proton therapy for lung cancers. <i>Practical Radiation Oncology</i> , 2015 , 5, e77-86	2.8	54
73	Robust optimization in intensity-modulated proton therapy to account for anatomy changes in lung cancer patients. <i>Radiotherapy and Oncology</i> , 2015 , 114, 367-72	5.3	53
72	Particle energization in 3D magnetic reconnection of relativistic pair plasmas. <i>Physics of Plasmas</i> , 2011 , 18, 052105	2.1	49
71	Dosimetric benefits of robust treatment planning for intensity modulated proton therapy for base-of-skull cancers. <i>Practical Radiation Oncology</i> , 2014 , 4, 384-91	2.8	46
70	Statistical assessment of proton treatment plans under setup and range uncertainties. <i>International Journal of Radiation Oncology Biology Physics</i> , 2013 , 86, 1007-13	4	45
69	Uncertainty incorporated beam angle optimization for IMPT treatment planning. <i>Medical Physics</i> , 2012 , 39, 5248-56	4.4	43
68	Simulations of Magnetorotational Instability in a Magnetized Couette Flow. <i>Astrophysical Journal</i> , 2006 , 643, 306-317	4.7	35

67	Dynamically accumulated dose and 4D accumulated dose for moving tumors. <i>Medical Physics</i> , 2012 , 39, 7359-67	4.4	34
66	Robust intensity-modulated proton therapy to reduce high linear energy transfer in organs at risk. <i>Medical Physics</i> , 2017 , 44, 6138-6147	4.4	32
65	Exploratory study of the association of volumetric modulated arc therapy (VMAT) plan robustness with local failure in head and neck cancer. <i>Journal of Applied Clinical Medical Physics</i> , 2017 , 18, 76-83	2.3	29
64	Parameterization of multiple Bragg curves for scanning proton beams using simultaneous fitting of multiple curves. <i>Physics in Medicine and Biology</i> , 2011 , 56, 7725-35	3.8	27
63	Impact of Spot Size and Spacing on the Quality of Robustly Optimized Intensity Modulated Proton Therapy Plans for Lung Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2018 , 101, 479-489	4	26
62	Impact of range shifter material on proton pencil beam spot characteristics. <i>Medical Physics</i> , 2015 , 42, 1335-40	4.4	25
61	Effects of respiratory motion on passively scattered proton therapy versus intensity modulated photon therapy for stage III lung cancer: are proton plans more sensitive to breathing motion?. <i>International Journal of Radiation Oncology Biology Physics</i> , 2013 , 87, 576-82	4	24
60	Dosimetric comparison of distal esophageal carcinoma plans for patients treated with small-spot intensity-modulated proton versus volumetric-modulated arc therapies. <i>Journal of Applied Clinical Medical Physics</i> , 2019 , 20, 15-27	2.3	23
59	Multiple energy extraction reduces beam delivery time for a synchrotron-based proton spot-scanning system. <i>Advances in Radiation Oncology</i> , 2018 , 3, 412-420	3.3	20
58	Traveling waves in a magnetized Taylor-Couette flow. <i>Physical Review E</i> , 2007 , 76, 016310	2.4	19
57	Small-spot intensity-modulated proton therapy and volumetric-modulated arc therapies for patients with locally advanced non-small-cell lung cancer: A dosimetric comparative study. <i>Journal of Applied Clinical Medical Physics</i> , 2018 , 19, 140-148	2.3	19
56	Robust treatment planning with conditional value at risk chance constraints in intensity-modulated proton therapy. <i>Medical Physics</i> , 2017 , 44, 28-36	4.4	18
55	Numerical Study of the Magnetorotational Instability in Princeton MRI Experiment. <i>Astrophysical Journal</i> , 2008 , 684, 515-524	4.7	18
54	Magnetized Ekman layer and Stewartson layer in a magnetized Taylor-Couette flow. <i>Physical Review E</i> , 2008 , 77, 056314	2.4	16
53	Robust Optimization for Intensity Modulated Proton Therapy to Redistribute High Linear Energy Transfer from Nearby Critical Organs to Tumors in Head and Neck Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2020 , 107, 181-193	4	15
52	Proton beam therapy for locally advanced lung cancer: A review. <i>World Journal of Clinical Oncology</i> , 2014 , 5, 568-75	2.5	15
51	An efficient method to determine double Gaussian fluence parameters in the eclipse proton pencil beam model. <i>Medical Physics</i> , 2016 , 43, 6544	4.4	14
50	Technical Note: Integrating an open source Monte Carlo code "MCsquare" for clinical use in intensity-modulated proton therapy. <i>Medical Physics</i> , 2020 , 47, 2558-2574	4.4	13

49	Perturbation of water-equivalent thickness as a surrogate for respiratory motion in proton therapy. <i>Journal of Applied Clinical Medical Physics</i> , 2016 , 17, 368-378	2.3	13
48	Technical Note: An efficient daily QA procedure for proton pencil beam scanning. <i>Medical Physics</i> , 2018 , 45, 1040-1049	4.4	12
47	Equilibrium and magnetic properties of a rotating plasma annulus. <i>Physics of Plasmas</i> , 2008 , 15, 102109	2.1	12
46	Comparison of linear and nonlinear programming approaches for "worst case dose" and "minmax" robust optimization of intensity-modulated proton therapy dose distributions. <i>Journal of Applied Clinical Medical Physics</i> , 2017 , 18, 15-25	2.3	11
45	Managing treatment-related uncertainties in proton beam radiotherapy for gastrointestinal cancers. <i>Journal of Gastrointestinal Oncology</i> , 2020 , 11, 212-224	2.8	11
44	Hybrid 3D analytical linear energy transfer calculation algorithm based on precalculated data from Monte Carlo simulations. <i>Medical Physics</i> , 2020 , 47, 745-752	4.4	11
43	Robust optimization in IMPT using quadratic objective functions to account for the minimum MU constraint. <i>Medical Physics</i> , 2018 , 45, 460-469	4.4	11
42	Robustness quantification methods comparison in volumetric modulated arc therapy to treat head and neck cancer. <i>Practical Radiation Oncology</i> , 2016 , 6, e269-e275	2.8	10
41	Assessing the robustness of passive scattering proton therapy with regard to local recurrence in stage III non-small cell lung cancer: a secondary analysis of a phase II trial. <i>Radiation Oncology</i> , 2014 , 9, 108	4.2	9
40	A novel and fast method for proton range verification using a step wedge and 2D scintillator. <i>Medical Physics</i> , 2017 , 44, 4409-4414	4.4	9
39	Ideal magnetohydrodynamic simulations of low beta compact toroid injection into a hot strongly magnetized plasma. <i>Nuclear Fusion</i> , 2009 , 49, 095008	3.3	9
38	NOISE-SUSTAINED CONVECTIVE INSTABILITY IN A MAGNETIZED TAYLOR-COUETTE FLOW. <i>Astrophysical Journal</i> , 2009 , 692, 998-1003	4.7	9
37	Expression of ICOSL is associated with decreased survival in invasive breast cancer. <i>PeerJ</i> , 2019 , 7, e6903	3.1	9
36	Clinical Validation of a Ray-Casting Analytical Dose Engine for Spot Scanning Proton Delivery Systems. <i>Technology in Cancer Research and Treatment</i> , 2019 , 18, 1533033819887182	2.7	9
35	Evaluation of the systematic error in using 3D dose calculation in scanning beam proton therapy for lung cancer. <i>Journal of Applied Clinical Medical Physics</i> , 2014 , 15, 4810	2.3	8
34	Patient-specific quantification of respiratory motion-induced dose uncertainty for step-and-shoot IMRT of lung cancer. <i>Medical Physics</i> , 2013 , 40, 121712	4.4	8
33	Early Outcomes of Patients With Locally Advanced Non-small Cell Lung Cancer Treated With Intensity-Modulated Proton Therapy Versus Intensity-Modulated Radiation Therapy: The Mayo Clinic Experience. <i>Advances in Radiation Oncology</i> , 2020 , 5, 450-458	3.3	8
32	Technical Note: Treatment planning system (TPS) approximations matter - comparing intensity-modulated proton therapy (IMPT) plan quality and robustness between a commercial and an in-house developed TPS for nonsmall cell lung cancer (NSCLC). <i>Medical Physics</i> , 2019 , 46, 4755-4762	4.4	7

31	Using field size factors to characterize the in-air fluence of a proton machine with a range shifter. <i>Radiation Oncology</i> , 2017 , 12, 52	4.2	7
30	Ideal magnetohydrodynamic simulations of unmagnetized dense plasma jet injection into a hot strongly magnetized plasma. <i>Nuclear Fusion</i> , 2011 , 51, 073026	3.3	7
29	Long-Term Evolution of Magnetized Bubbles in Galaxy Clusters. <i>Astrophysical Journal</i> , 2008 , 684, L57-L60.	4.7	7
28	An Automatic Approach for Satisfying Dose-Volume Constraints in Linear Fluence Map Optimization for IMPT. <i>Journal of Cancer Therapy</i> , 2014 , 5, 198-207	0.2	7
27	Acute Toxicities and Short-Term Patient Outcomes After Intensity-Modulated Proton Beam Radiation Therapy or Intensity-Modulated Photon Radiation Therapy for Esophageal Carcinoma: A Mayo Clinic Experience. <i>Advances in Radiation Oncology</i> , 2020 , 5, 871-879	3.3	7
26	Automation of routine elements for spot-scanning proton patient-specific quality assurance. <i>Medical Physics</i> , 2019 , 46, 5-14	4.4	7
25	Technical Note: Comprehensive evaluation and implementation of two independent methods for beam monitor calibration for proton scanning beam. <i>Medical Physics</i> , 2019 , 46, 5867-5875	4.4	6
24	Ideal magnetohydrodynamic simulation of magnetic bubble expansion as a model for extragalactic radio lobes. <i>Physics of Plasmas</i> , 2008 , 15, 072905	2.1	6
23	A novel and individualized robust optimization method using normalized dose interval volume constraints (NDIVC) for intensity-modulated proton radiotherapy. <i>Medical Physics</i> , 2019 , 46, 382-393	4.4	6
22	Mixed integer programming with dose-volume constraints in intensity-modulated proton therapy. <i>Journal of Applied Clinical Medical Physics</i> , 2017 , 18, 29-35	2.3	5
21	Use of a radial projection to reduce the statistical uncertainty of spot lateral profiles generated by Monte Carlo simulation. <i>Journal of Applied Clinical Medical Physics</i> , 2017 , 18, 88-96	2.3	5
20	Beam angle comparison for distal esophageal carcinoma patients treated with intensity-modulated proton therapy. <i>Journal of Applied Clinical Medical Physics</i> , 2020 , 21, 141-152	2.3	4
19	Consensus Statement on Proton Therapy in Mesothelioma. <i>Practical Radiation Oncology</i> , 2021 , 11, 119-123.	3.8	4
18	Exploratory Investigation of Dose-Linear Energy Transfer (LET) Volume Histogram (DLVH) for Adverse Events Study in Intensity Modulated Proton Therapy (IMPT). <i>International Journal of Radiation Oncology Biology Physics</i> , 2021 , 110, 1189-1199	4	4
17	Robustness Quantification and Worst-Case Robust Optimization in Intensity-Modulated Proton Therapy 2016 , 139-155		3
16	Intensity-modulated proton therapy (IMPT) interplay effect evaluation of asymmetric breathing with simultaneous uncertainty considerations in patients with non-small cell lung cancer. <i>Medical Physics</i> , 2020 , 47, 5428-5440	4.4	3
15	Technical Note: Using dual step wedge and 2D scintillator to achieve highly precise and robust proton range quality assurance. <i>Medical Physics</i> , 2018 , 45, 2947-2951	4.4	2
14	Intensity Modulated Proton Therapy for Hepatocellular Carcinoma: Initial Clinical Experience. <i>Advances in Radiation Oncology</i> , 2021 , 6, 100675	3.3	2

13	Impact of planned dose reporting methods on Gamma pass rates for IROC lung and liver motion phantoms treated with pencil beam scanning protons. <i>Radiation Oncology</i> , 2019 , 14, 108	4.2	1
12	Proton beam radiotherapy for patients with early-stage and advanced lung cancer: a narrative review with contemporary clinical recommendations. <i>Journal of Thoracic Disease</i> , 2021 , 13, 1270-1285	2.6	1
11	Feasibility of using megavoltage computed tomography to reduce proton range uncertainty: A simulation study. <i>Journal of Applied Clinical Medical Physics</i> , 2021 , 22, 131-140	2.3	1
10	Empirical Relative Biological Effectiveness (RBE) for Mandible Osteoradionecrosis (ORN) in Head and Neck Cancer Patients Treated With Pencil-Beam-Scanning Proton Therapy (PBSPT): A Retrospective, Case-Matched Cohort Study.. <i>Frontiers in Oncology</i> , 2022 , 12, 843175	5.3	1
9	Executive Summary of Clinical and Technical Guidelines for Esophageal Cancer Proton Beam Therapy From the Particle Therapy Co-Operative Group Thoracic and Gastrointestinal Subcommittees. <i>Frontiers in Oncology</i> , 2021 , 11, 748331	5.3	0
8	Technical Note: 4D robust optimization in small spot intensity-modulated proton therapy (IMPT) for distal esophageal carcinoma. <i>Medical Physics</i> , 2021 , 48, 4636-4647	4.4	0
7	A Critical Review of LET-Based Intensity-Modulated Proton Therapy Plan Evaluation and Optimization for Head and Neck Cancer Management. <i>International Journal of Particle Therapy</i> , 2021 , 8, 36-49	1.5	0
6	Technical Note: Multiple energy extraction techniques for synchrotron-based proton delivery systems may exacerbate motion interplay effects in lung cancer treatments. <i>Medical Physics</i> , 2021 , 48, 4812-4823	4.4	0
5	Technical Note: Clinical modeling and validation of breast tissue expander metallic ports in a commercial treatment planning system for proton therapy. <i>Medical Physics</i> , 2021 , 48, 7512-7525	4.4	0
4	Technical Note: Long-term monitoring of diode sensitivity degradation induced by proton irradiation. <i>Medical Physics</i> , 2021 , 48, 6634-6641	4.4	
3	Dosimetric analysis of distal esophageal adenocarcinoma patients treated by intensity-modulated proton therapy with small spot size.. <i>Journal of Clinical Oncology</i> , 2018 , 36, 159-159	2.2	
2	A method for quantitative evaluations of scanning-proton dose distributions. <i>Journal of Applied Clinical Medical Physics</i> , 2021 , 22, 193-201	2.3	
1	Implementation and experimental evaluation of Mega-voltage fan-beam CT using a linear accelerator. <i>Radiation Oncology</i> , 2021 , 16, 139	4.2	