

Jan Jakob Wilkens

List of Publications by Year in Descending Order

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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.

118
papers

2,761
citations

31
h-index

49
g-index

134
ext. papers

3,246
ext. citations

3.8
avg. IF

5.2
L-index

#	Paper	IF	Citations
118	Deep Learning Based GTV Delineation and Progression Free Survival Risk Score Prediction for Head and Neck Cancer Patients. <i>Lecture Notes in Computer Science</i> , 2022 , 150-159	0.9	0
117	X-ray Dark-Field CT for Early Detection of Radiation-induced Lung Injury in a Murine Model. <i>Radiology</i> , 2022 , 212332	20.5	0
116	A comprehensive Monte Carlo study of out-of-field secondary neutron spectra in a scanned-beam proton therapy gantry room. <i>Zeitschrift Fur Medizinische Physik</i> , 2021 , 31, 215-228	7.6	3
115	Establishment of Microbeam Radiation Therapy at a Small-Animal Irradiator. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021 , 109, 626-636	4	1
114	A Five-Year report on the conception and establishment of the MSc Radiation Biology at the Technical University of Munich. <i>International Journal of Radiation Biology</i> , 2021 , 97, 256-264	2.9	0
113	Early detection of radiation-induced lung damage with X-ray dark-field radiography in mice. <i>European Radiology</i> , 2021 , 31, 4175-4183	8	4
112	Deep Learning Based HPV Status Prediction for Oropharyngeal Cancer Patients. <i>Cancers</i> , 2021 , 13,	6.6	6
111	In-vivo X-ray dark-field computed tomography for the detection of radiation-induced lung damage in mice. <i>Physics and Imaging in Radiation Oncology</i> , 2021 , 20, 11-16	3.1	0
110	Prediction of multi-criteria optimization (MCO) parameter efficiency in volumetric modulated arc therapy (VMAT) treatment planning using machine learning (ML). <i>Physica Medica</i> , 2021 , 81, 102-113	2.7	2
109	Report on planning comparison of VMAT, IMRT and helical tomotherapy for the ESCALOX-trial pre-study. <i>Radiation Oncology</i> , 2020 , 15, 253	4.2	3
108	Neuro-oncology Management During the COVID-19 Pandemic With a Focus on WHO Grade III and IV Gliomas. <i>Neuro-Oncology</i> , 2020 ,	1	39
107	The dosimetric impact of stabilizing spinal implants in radiotherapy treatment planning with protons and photons: standard titanium alloy vs. radiolucent carbon-fiber-reinforced PEEK systems. <i>Journal of Applied Clinical Medical Physics</i> , 2020 , 21, 6-14	2.3	13
106	Simulation and measurement of microbeam dose distribution in lung tissue. <i>Physica Medica</i> , 2020 , 75, 77-82	2.7	2
105	Clinical microbeam radiation therapy with a compact source: specifications of the line-focus X-ray tube. <i>Physics and Imaging in Radiation Oncology</i> , 2020 , 14, 74-81	3.1	1
104	Modeling RBE-weighted dose variations in irregularly moving abdominal targets treated with carbon ion beams. <i>Medical Physics</i> , 2020 , 47, 2768-2778	4.4	3
103	First statement on preparation for the COVID-19 pandemic in large German Speaking University-based radiation oncology departments. <i>Radiation Oncology</i> , 2020 , 15, 74	4.2	32
102	A proof of principle experiment for microbeam radiation therapy at the Munich compact light source. <i>Radiation and Environmental Biophysics</i> , 2020 , 59, 111-120	2	9

101	Approximation of dose quality indicator values in multi-criteria optimized (MCO) volumetric modulated arc therapy (VMAT) treatment planning using trilinear dose interpolation. <i>Zeitschrift Fur Medizinische Physik</i> , 2020 , 30, 315-324	7.6	1
100	Technical and dosimetric realization of in vivo x-ray microbeam irradiations at the Munich Compact Light Source. <i>Medical Physics</i> , 2020 , 47, 5183-5193	4.4	2
99	MRI based neuroanatomical segmentation in breast cancer patients: leptomeningeal carcinomatosis vs. oligometastatic brain disease vs. multimetastatic brain disease. <i>Radiation Oncology</i> , 2019 , 14, 170	4.2	3
98	Neoadjuvant image-guided helical intensity modulated radiotherapy of extremity sarcomas - a single center experience. <i>Radiation Oncology</i> , 2019 , 14, 2	4.2	10
97	Deep inspiration breath-hold for left-sided breast irradiation: Analysis of dose-mass histograms and the impact of lung expansion. <i>Radiation Oncology</i> , 2019 , 14, 109	4.2	18
96	Neoadjuvant stereotactic radiosurgery for intracerebral metastases of solid tumors (NepoMUC): a phase I dose escalation trial. <i>Cancer Communications</i> , 2019 , 39, 73	9.4	4
95	Adjuvant versus early salvage radiotherapy: outcome of patients with prostate cancer treated with postoperative radiotherapy after radical prostatectomy. <i>Radiation Oncology</i> , 2019 , 14, 198	4.2	4
94	The Role of Particle Therapy for the Treatment of Skull Base Tumors and Tumors of the Central Nervous System (CNS). <i>Topics in Magnetic Resonance Imaging</i> , 2019 , 28, 49-61	2.3	
93	Beam size limit for pencil minibeam radiotherapy determined from side effects in an in-vivo mouse ear model. <i>PLoS ONE</i> , 2019 , 14, e0221454	3.7	5
92	Early and late toxicity profiles of patients receiving immediate postoperative radiotherapy versus salvage radiotherapy for prostate cancer after prostatectomy. <i>Strahlentherapie Und Onkologie</i> , 2019 , 195, 131-144	4.3	2
91	Application of variance-based uncertainty and sensitivity analysis to biological modeling in carbon ion treatment plans. <i>Medical Physics</i> , 2019 , 46, 437-447	4.4	5
90	Hybrid dose calculation: a dose calculation algorithm for microbeam radiation therapy. <i>Physics in Medicine and Biology</i> , 2018 , 63, 045013	3.8	14
89	ESTRO ACROP: Technology for precision small animal radiotherapy research: Optimal use and challenges. <i>Radiotherapy and Oncology</i> , 2018 , 126, 471-478	5.3	62
88	Radiomics in radiooncology - Challenging the medical physicist. <i>Physica Medica</i> , 2018 , 48, 27-36	2.7	49
87	Dosimetric impact of tumor treating field (TTField) transducer arrays onto treatment plans for glioblastomas - a planning study. <i>Radiation Oncology</i> , 2018 , 13, 31	4.2	7
86	Dosimetric characterization of a single crystal diamond detector in X-ray beams for preclinical research. <i>Zeitschrift Fur Medizinische Physik</i> , 2018 , 28, 303-309	7.6	11
85	MRI-based high-precision irradiation in an orthotopic pancreatic tumor mouse model : A treatment planning study. <i>Strahlentherapie Und Onkologie</i> , 2018 , 194, 944-952	4.3	8
84	Evaluation of radiation-related invasion in primary patient-derived glioma cells and validation with established cell lines: impact of different radiation qualities with differing LET. <i>Journal of Neuro-Oncology</i> , 2018 , 139, 583-590	4.8	8

83	Dual-layer spectral computed tomography: measuring relative electron density. <i>European Radiology Experimental</i> , 2018 , 2, 20	4.5	16
82	Dose-compatible grating-based phase-contrast mammography on mastectomy specimens using a compact synchrotron source. <i>Scientific Reports</i> , 2018 , 8, 15700	4.9	10
81	Matching the reaction-diffusion simulation to dynamic [F]FMISO PET measurements in tumors: extension to a flow-limited oxygen-dependent model. <i>Physiological Measurement</i> , 2017 , 38, 188-204	2.9	2
80	Do selective radiation dose escalation and tumour hypoxia status impact the loco-regional tumour control after radio-chemotherapy of head & neck tumours? The ESCALOX protocol. <i>Radiation Oncology</i> , 2017 , 12, 45	4.2	23
79	Quantification of the uncertainties of a biological model and their impact on variable RBE proton treatment plan optimization. <i>Physica Medica</i> , 2017 , 36, 91-102	2.7	25
78	Radiolucent Carbon Fiber-Reinforced Pedicle Screws for Treatment of Spinal Tumors: Advantages for Radiation Planning and Follow-Up Imaging. <i>World Neurosurgery</i> , 2017 , 105, 294-301	2.1	60
77	A light-weight compact proton gantry design with a novel dose delivery system for broad-energetic laser-accelerated beams. <i>Physics in Medicine and Biology</i> , 2017 , 62, 5531-5555	3.8	29
76	Rapid implementation of the repair-misrepair-fixation (RMF) model facilitating online adaption of radiosensitivity parameters in ion therapy. <i>Physics in Medicine and Biology</i> , 2017 , 62, N285-N296	3.8	11
75	Systematic out-of-field secondary neutron spectrometry and dosimetry in pencil beam scanning proton therapy. <i>Medical Physics</i> , 2017 , 44, 1912-1920	4.4	7
74	Increased cell survival and cytogenetic integrity by spatial dose redistribution at a compact synchrotron X-ray source. <i>PLoS ONE</i> , 2017 , 12, e0186005	3.7	11
73	Interobserver variability of patient positioning using four different CT datasets for image registration in lung stereotactic body radiotherapy. <i>Strahlentherapie Und Onkologie</i> , 2017 , 193, 831-839	4.3	4
72	BioXmark for high-precision radiotherapy in an orthotopic pancreatic tumor mouse model : Experiences with a liquid fiducial marker. <i>Strahlentherapie Und Onkologie</i> , 2017 , 193, 1039-1047	4.3	10
71	Master of Science (MSc) Program in Radiation Biology: An Interdepartmental Course Bridging the Gap between Radiation-Related Preclinical and Clinical Disciplines to Prepare Next-Generation Medical Scientists. <i>Frontiers in Oncology</i> , 2017 , 7, 226	5.3	3
70	Registration uncertainties between 3D cone beam computed tomography and different reference CT datasets in lung stereotactic body radiation therapy. <i>Radiation Oncology</i> , 2016 , 11, 142	4.2	10
69	Prioritized efficiency optimization for intensity modulated proton therapy. <i>Physics in Medicine and Biology</i> , 2016 , 61, 8249-8265	3.8	4
68	Reduced volume SIB-IMRT/IGRT to head and neck cancer in elderly and frail patients: outcome and toxicity. <i>Radiation Oncology</i> , 2016 , 11, 133	4.2	12
67	Proton Minibeam Radiation Therapy Reduces Side Effects in an In Vivo Mouse Ear Model. <i>International Journal of Radiation Oncology Biology Physics</i> , 2016 , 95, 234-241	4	52
66	Individualized radiotherapy by combining high-end irradiation and magnetic resonance imaging. <i>Strahlentherapie Und Onkologie</i> , 2016 , 192, 209-15	4.3	11

65	SU-F-T-217: A Comprehensive Monte-Carlo Study of Out-Of-Field Secondary Neutron Spectra in a Scanned-Beam Proton Therapy Treatment Room. <i>Medical Physics</i> , 2016 , 43, 3512-3512	4.4	
64	Development and clinical evaluation of an ionization chamber array with 3.5 mm pixel pitch for quality assurance in advanced radiotherapy techniques. <i>Medical Physics</i> , 2016 , 43, 2283	4.4	3
63	Phantom based evaluation of CT to CBCT image registration for proton therapy dose recalculation. <i>Physics in Medicine and Biology</i> , 2015 , 60, 595-613	3.8	38
62	Investigation of EBT2 and EBT3 films for proton dosimetry in the 4-20 MeV energy range. <i>Radiation and Environmental Biophysics</i> , 2015 , 54, 71-79	2	37
61	Fast Biological Modeling for Voxel-based Heavy Ion Treatment Planning Using the Mechanistic Repair-Misrepair-Fixation Model and Nuclear Fragment Spectra. <i>International Journal of Radiation Oncology Biology Physics</i> , 2015 , 93, 557-68	4	27
60	Assessment of secondary radiation and radiation protection in laser-driven proton therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2015 , 25, 112-22	7.6	7
59	SYRA3 COST Action--Microbeam radiation therapy: Roots and prospects. <i>Physica Medica</i> , 2015 , 31, 561-32.7		16
58	Energy dependent track structure parametrisations for protons and carbon ions based on nanometric simulations. <i>European Physical Journal D</i> , 2015 , 69, 1	1.3	9
57	Improved normal tissue protection by proton and X-ray microchannels compared to homogeneous field irradiation. <i>Physica Medica</i> , 2015 , 31, 615-20	2.7	9
56	Future development of biologically relevant dosimetry. <i>British Journal of Radiology</i> , 2015 , 88, 20140392	3.4	43
55	EUD-based biological optimization for carbon ion therapy. <i>Medical Physics</i> , 2015 , 42, 6248-57	4.4	7
54	A treatment planning study to assess the feasibility of laser-driven proton therapy using a compact gantry design. <i>Medical Physics</i> , 2015 , 42, 5120-9	4.4	11
53	Local weighting of nanometric track structure properties in macroscopic voxel geometries for particle beam treatment planning. <i>Physics in Medicine and Biology</i> , 2015 , 60, 9145-56	3.8	8
52	Dosimetric impact of different CT datasets for stereotactic treatment planning using 3D conformal radiotherapy or volumetric modulated arc therapy. <i>Radiation Oncology</i> , 2015 , 10, 249	4.2	12
51	Paving the Road for Modern Particle Therapy - What Can We Learn from the Experience Gained with Fast Neutron Therapy in Munich?. <i>Frontiers in Oncology</i> , 2015 , 5, 262	5.3	13
50	Investigating CT to CBCT image registration for head and neck proton therapy as a tool for daily dose recalculation. <i>Medical Physics</i> , 2015 , 42, 1354-66	4.4	86
49	Implications of free breathing motion assessed by 4D-computed tomography on the delivered dose in radiotherapy for esophageal cancer. <i>Medical Dosimetry</i> , 2015 , 40, 378-82	1.3	2
48	Impact of interfractional changes in head and neck cancer patients on the delivered dose in intensity modulated radiotherapy with protons and photons. <i>Physica Medica</i> , 2015 , 31, 266-72	2.7	36

47	Corrigendum to [Instrumentation for diagnostics and control of laser-accelerated proton (ion) beams][Phys Med 30 (2014) 255-70]. <i>Physica Medica</i> , 2015 , 31, 117	2.7	3
46	The impact of CT window settings on the contouring of a moving target: A phantom study. <i>Clinical Radiology</i> , 2014 , 69, e331-6	2.9	4
45	Instrumentation for diagnostics and control of laser-accelerated proton (ion) beams. <i>Physica Medica</i> , 2014 , 30, 255-70	2.7	62
44	Variance-based sensitivity analysis of biological uncertainties in carbon ion therapy. <i>Physica Medica</i> , 2014 , 30, 583-7	2.7	11
43	Validation of heat shock protein 70 as a tumor-specific biomarker for monitoring the outcome of radiation therapy in tumor mouse models. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 88, 694-700	4	33
42	A systematic review of antiproton radiotherapy. <i>Frontiers in Physics</i> , 2014 , 1,	3.9	3
41	Laser ion acceleration for hadron therapy. <i>Physics-Uspekhi</i> , 2014 , 57, 1149-1179	2.8	72
40	A dose error evaluation study for 4D dose calculations. <i>Physics in Medicine and Biology</i> , 2014 , 59, 6401-15,8	3	3
39	The effects of ultra-high dose rate proton irradiation on growth delay in the treatment of human tumor xenografts in nude mice. <i>Radiation Research</i> , 2014 , 181, 177-83	3.1	63
38	SU-D-BRE-05: Feasibility and Limitations of Laser-Driven Proton Therapy: A Treatment Planning Study. <i>Medical Physics</i> , 2014 , 41, 112-112	4.4	
37	WE-D-BRE-07: Variance-Based Sensitivity Analysis to Quantify the Impact of Biological Uncertainties in Particle Therapy. <i>Medical Physics</i> , 2014 , 41, 494-494	4.4	
36	SU-E-T-415: An Ionization Chamber Array with High Spatial Resolution for External Beam Radiotherapy. <i>Medical Physics</i> , 2014 , 41, 321-321	4.4	
35	Reduced side effects by proton microchannel radiotherapy: study in a human skin model. <i>Radiation and Environmental Biophysics</i> , 2013 , 52, 123-33	2	38
34	SU-E-T-52: Evaluation of EBT2 and EBT3 Films for Dosimetry in Laser-Driven Ion Accelerators. <i>Medical Physics</i> , 2013 , 40, 215-215	4.4	1
33	Prioritized optimization in intensity modulated proton therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2012 , 22, 21-8	7.6	15
32	Laser-driven beam lines for delivering intensity modulated radiation therapy with particle beams. <i>Journal of Biophotonics</i> , 2012 , 5, 903-11	3.1	16
31	Comparison of Gafchromic EBT2 and EBT3 films for clinical photon and proton beams. <i>Medical Physics</i> , 2012 , 39, 5257-62	4.4	171
30	A laser-driven nanosecond proton source for radiobiological studies. <i>Applied Physics Letters</i> , 2012 , 101, 243701	3.4	75

29	Dosimetric effects of energy spectrum uncertainties in radiation therapy with laser-driven particle beams. <i>Physics in Medicine and Biology</i> , 2012 , 57, N47-53	3.8	2
28	Measurements to predict the time of target replacement of a helical tomotherapy. <i>Journal of Applied Clinical Medical Physics</i> , 2011 , 12, 3596	2.3	2
27	Theoretical analysis of the dose dependence of the oxygen enhancement ratio and its relevance for clinical applications. <i>Radiation Oncology</i> , 2011 , 6, 171	4.2	54
26	Scanning irradiation device for mice in vivo with pulsed and continuous proton beams. <i>Radiation and Environmental Biophysics</i> , 2011 , 50, 339-44	2	24
25	Application of constant vs. variable relative biological effectiveness in treatment planning of intensity-modulated proton therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011 , 79, 80-8	4	62
24	Modelling of the oxygen enhancement ratio for ion beam radiation therapy. <i>Physics in Medicine and Biology</i> , 2011 , 56, 3251-68	3.8	84
23	Sparse dose painting based on a dual-pass kinetic-oxygen mapping of dynamic PET images. <i>Lecture Notes in Computer Science</i> , 2011 , 14, 484-91	0.9	
22	Quantitative assessment of hypoxia kinetic models by a cross-study of dynamic 18F-FAZA and 15O-H2O in patients with head and neck tumors. <i>Journal of Nuclear Medicine</i> , 2010 , 51, 1386-94	8.9	29
21	Advanced treatment planning methods for efficient radiation therapy with laser accelerated proton and ion beams. <i>Medical Physics</i> , 2010 , 37, 5330-40	4.4	46
20	Comparative analysis of an image-guided versus a non-image-guided setup approach in terms of delivered dose to the parotid glands in head-and-neck cancer IMRT. <i>International Journal of Radiation Oncology Biology Physics</i> , 2010 , 77, 1266-73	4	29
19	Radiobiological effect based treatment plan optimization with the linear quadratic model. <i>Zeitschrift Fur Medizinische Physik</i> , 2010 , 20, 188-96	7.6	9
18	Modifying proton fluence spectra to generate spread-out Bragg peaks with laser accelerated proton beams. <i>Physics in Medicine and Biology</i> , 2009 , 54, N459-66	3.8	21
17	Worst case optimization: a method to account for uncertainties in the optimization of intensity modulated proton therapy. <i>Physics in Medicine and Biology</i> , 2008 , 53, 1689-700	3.8	189
16	Speed optimized influence matrix processing in inverse treatment planning tools. <i>Physics in Medicine and Biology</i> , 2008 , 53, N157-64	3.8	10
15	Non-uniform depth scanning for proton therapy systems employing active energy variation. <i>Physics in Medicine and Biology</i> , 2008 , 53, N149-55	3.8	18
14	Intensity-modulated radiotherapy of nasopharyngeal carcinoma: a comparative treatment planning study of photons and protons. <i>Radiation Oncology</i> , 2008 , 3, 4	4.2	76
13	IMRT treatment planning for prostate cancer using prioritized prescription optimization and mean-tail-dose functions. <i>Linear Algebra and Its Applications</i> , 2008 , 428, 1345-1364	0.9	31
12	Direct comparison of biologically optimized spread-out bragg peaks for protons and carbon ions. <i>International Journal of Radiation Oncology Biology Physics</i> , 2008 , 70, 262-6	4	41

11	A comparison of three optimization algorithms for intensity modulated radiation therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2008 , 18, 111-9	7.6	14
10	IMRT treatment planning based on prioritizing prescription goals. <i>Physics in Medicine and Biology</i> , 2007 , 52, 1675-92	3.8	69
9	Quantifying lateral tissue heterogeneities in hadron therapy. <i>Medical Physics</i> , 2007 , 34, 1506-13	4.4	36
8	Demonstration of scan path optimization in proton therapy. <i>Medical Physics</i> , 2007 , 34, 3457-64	4.4	20
7	Introduction to Radiotherapy with Photon and Electron Beams and Treatment Planning from Conformal Radiotherapy to IMRT. <i>AIP Conference Proceedings</i> , 2007 ,	0	2
6	Fast multifield optimization of the biological effect in ion therapy. <i>Physics in Medicine and Biology</i> , 2006 , 51, 3127-40	3.8	35
5	Physical Optimization 2006 , 31-45		1
4	Optimization of radiobiological effects in intensity modulated proton therapy. <i>Medical Physics</i> , 2005 , 32, 455-65	4.4	42
3	A phenomenological model for the relative biological effectiveness in therapeutic proton beams. <i>Physics in Medicine and Biology</i> , 2004 , 49, 2811-25	3.8	144
2	Three-dimensional LET calculations for treatment planning of proton therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2004 , 14, 41-6	7.6	29
1	Analytical linear energy transfer calculations for proton therapy. <i>Medical Physics</i> , 2003 , 30, 806-15	4.4	75