Piotr Zygmanski

List of Publications by Year in descending order

57 papers	1,033 citations	516710 16 h-index	434195 31 g-index
57 all docs	57 docs citations	57 times ranked	1119 citing authors

#	Article	IF	Citations
1	Technical Report: Development and Implementation of an Open Source Template Interpretation Class Library for Automated Treatment Planning. Practical Radiation Oncology, 2022, 12, e153-e160.	2.1	3
2	Remote sensing array (RSA) for linac beam monitoring. Physics in Medicine and Biology, 2022, , .	3.0	1
3	Resistive electrode array (REA) for radiotherapy beam monitoring and quality assurance. Physics in Medicine and Biology, 2022, 67, 135005.	3.0	1
4	Selfâ€powered multilayer radioisotope identification device. Medical Physics, 2021, 48, 1921-1930.	3.0	1
5	Routine pretreatment patientâ€specific IMRT QA (PSâ€IMRTâ€QA) should be discontinued and replaced with a realâ€time onâ€board beam monitoring system (BMS). Medical Physics, 2021, 48, 4715-4718.	3.0	5
6	Optimization of MLC parameters for TPS calculation and dosimetric verification: application to single isocenter radiosurgery of multiple brain lesions using VMAT. Biomedical Physics and Engineering Express, 2020, 6, 015004.	1.2	3
7	Towards customizable thin-panel low-Z detector arrays: electrode design for increased spatial resolution ion chamber arrays. Physics in Medicine and Biology, 2020, 65, 08NT02.	3.0	3
8	Nanoporous aerogel-based periodic high-energy electron current x-ray sensors. Journal Physics D: Applied Physics, 2020, 53, 265303.	2.8	5
9	Selfâ€powered nanoâ€porous aerogel xâ€ray sensor employing fast electron current. Medical Physics, 2019, 46, 4233-4240.	3.0	9
10	LINAC based stereotactic radiosurgery for multiple brain metastases: guidance for clinical implementation. Acta OncolÃ³gica, 2019, 58, 1275-1282.	1.8	50
11	3D printing for rapid prototyping of lowâ€Z/density ionization chamber arrays. Medical Physics, 2019, 46, 5770-5779.	3.0	4
12	The dichotomous nature of dose enhancement by gold nanoparticle aggregates in radiotherapy. Nanomedicine, 2018, 13, 809-823.	3.3	12
13	Flexible perovskite based X-ray detectors for dose monitoring in medical imaging applications. Physics in Medicine, 2018, 5, 20-23.	1.3	62
14	Selection of head and neck cancer patients for adaptive replanning of radiation treatment using kV-CBCT. Biomedical Physics and Engineering Express, 2018, 4, 055009.	1.2	4
15	Technical Note: A novel interdigital transparent thinâ€film detector for medical dosimetry. Medical Physics, 2017, 44, 1969-1974.	3.0	0
16	Effective Contact Potential of Thin Film Metal-Insulator Nanostructures and Its Role in Self-Powered Nanofilm X-ray Sensors. ACS Applied Materials & Interfaces, 2017, 9, 11258-11265.	8.0	6
17	Angular dose anisotropy around gold nanoparticles exposed to X-rays. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 1653-1661.	3.3	14
18	Portal <scp>MV</scp> imaging with thinâ€film highâ€energy current Xâ€ray detectors: A Monte Carlo study. Medical Physics, 2017, 44, 6128-6137.	3.0	0

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19	Signal enhancement due to highâ€Z nanofilm electrodes in parallel plate ionization chambers with variable microgaps. Medical Physics, 2017, 44, 6632-6640.	3.0	1
20	Topological detector: measuring continuous dosimetric quantities with few-element detector array. Physics in Medicine and Biology, 2016, 61, N403-N414.	3.0	4
21	Nanoscale radiation transport and clinical beam modeling for gold nanoparticle dose enhanced radiotherapy (GNPT) using X-rays. British Journal of Radiology, 2016, 89, 20150200.	2.2	58
22	Prototypes of self-powered radiation detectors employing intrinsic high-energy current. Medical Physics, 2015, 43, 16-22.	3.0	10
23	A self-powered thin-film radiation detector using intrinsic high-energy current. Medical Physics, 2015, 43, 4-15.	3.0	13
24	New potential for enhancing concomitant chemoradiotherapy with FDA approved concentrations of cisplatin via the photoelectric effect. Physica Medica, 2015, 31, 25-30.	0.7	16
25	Dosimetric properties of high energy current (HEC) detector in keV x-ray beams. Physics in Medicine and Biology, 2015, 60, N121-N129.	3.0	9
26	Monte Carlo simulation of a prototypical patient dosimetry system for fluoroscopic procedures. Physics in Medicine and Biology, 2015, 60, 5891-5909.	3.0	5
27	Technical Note: Nanometric organic photovoltaic thin film detectors for dose monitoring in diagnostic xâ€ray imaging. Medical Physics, 2015, 42, 4027-4032.	3.0	9
28	Targeted radiotherapy with gold nanoparticles: current status and future perspectives. Nanomedicine, 2014, 9, 1063-1082.	3.3	144
29	SU-E-CAMPUS-I-01: Nanometric Organic Photovoltaic Thin Film X-Ray Detectors for Clinical KVp Beams. Medical Physics, 2014, 41, 384-385.	3.0	0
30	A stochastic model of cell survival for high-Z nanoparticle radiotherapy. Medical Physics, 2013, 40, 024102.	3.0	27
31	Stochastic triangulation for prostate positioning during radiotherapy using short CBCT arcs. Radiotherapy and Oncology, 2013, 106, 241-249.	0.6	4
32	The effect of flattening filter free delivery on endothelial dose enhancement with gold nanoparticles. Medical Physics, 2013, 40, 031706.	3.0	32
33	Impact of beam quality on megavoltage radiotherapy treatment techniques utilizing gold nanoparticles for dose enhancement. Physics in Medicine and Biology, 2013, 58, 451-464.	3.0	70
34	Automation of clip localization in Digital Tomosynthesis for setup of breast cancer patients. Physica Medica, 2013, 29, 75-82.	0.7	0
35	Bayesian Estimation Applied to Stochastic Localization with Constraints due to Interfaces and Boundaries. Mathematical Problems in Engineering, 2013, 2013, 1-17.	1.1	1
36	Dependence of Monte Carlo microdosimetric computations on the simulation geometry of gold nanoparticles. Physics in Medicine and Biology, 2013, 58, 7961-7977.	3.0	79

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37	CT reconstruction from few-views by Anisotropic Total Variation minimization. , 2012, , .		2
38	Optimal parameters for clinical implementation of breast cancer patient setup using Varian DTS software. Journal of Applied Clinical Medical Physics, 2012, 13, 60-73.	1.9	6
39	Localization of a Portion of an Endorectal Balloon for Prostate Image-Guided Radiation Therapy Using Cone-Beam Tomosynthesis: A Feasibility Study. International Journal of Radiation Oncology Biology Physics, 2012, 83, e257-e264.	0.8	3
40	Angular dose dependency of MatriXX TM and its calibration. Journal of Applied Clinical Medical Physics, 2010, 11, 241-251.	1.9	55
41	Optimizing an analytical dose calculation algorithm for fast 2D calculations. Zeitschrift Fur Medizinische Physik, 2010, 20, 61-67.	1.5	0
42	Clinical application of Varian OBI CBCT system and dose reduction techniques in breast cancer patients setup. Medical Physics, 2010, 37, 2985-2998.	3.0	8
43	Evaluation of MatriXX for IMRT and VMAT dose verifications in peripheral dose regions. Medical Physics, 2010, 37, 3704-3714.	3.0	41
44	An oscillating sweeping gap test for VMAT quality assurance. Physics in Medicine and Biology, 2010, 55, 5029-5044.	3.0	16
45	Evaluation of radiation dose delivered by cone beam CT and tomosynthesis employed for setup of external breast irradiation. Medical Physics, 2009, 36, 164-173.	3.0	28
46	Evaluation of clip localization for different kilovoltage imaging modalities as applied to partial breast irradiation setup. Medical Physics, 2009, 36, 821-834.	3.0	11
47	Optimal gantry angles and field sizes in kilovoltage cone-beam tomosynthesis for set-up of women with breast cancer undergoing radiotherapy treatment. Radiotherapy and Oncology, 2009, 93, 633-638.	0.6	8
48	An independent dose calculation algorithm for MLC-based radiotherapy including the spatial dependence of MLC transmission. Physics in Medicine and Biology, 2008, 53, 557-573.	3.0	23
49	A volumetric-modulated arc therapy using sub-conformal dynamic arc with a monotonic dynamic multileaf collimator modulation. Physics in Medicine and Biology, 2008, 53, 6395-6417.	3.0	11
50	An EPID response calculation algorithm using spatial beam characteristics of primary, head scattered and MLC transmitted radiation. Medical Physics, 2008, 35, 2224-2234.	3.0	6
51	Spatial dependence of MLC transmission in IMRT delivery. Physics in Medicine and Biology, 2007, 52, 5985-5999.	3.0	24
52	An independent dose calculation algorithm for MLC-based stereotactic radiotherapy. Medical Physics, 2007, 34, 1605-1614.	3.0	18
53	Determination of depth and field size dependence of multileaf collimator transmission in intensityâ€modulated radiation therapy beams. Journal of Applied Clinical Medical Physics, 2007, 8, 76-95.	1.9	24
54	An MLC-based linac QA procedure for the characterization of radiation isocenter and room lasersâ€™ position. Medical Physics, 2006, 33, 1780-1787.	3.0	27

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55	Dynamic IMRT Treatments of Sinus Region Tumors: Comparison of Monte Carlo Calculations with Treatment Planning System Calculations and Ion Chamber Measurements. Technology in Cancer Research and Treatment, 2006, 5, 489-495.	1.9	7
56	Maximum MLC opening effect in dynamic delivery of IMRT: leaf-positional analysis. Journal of Applied Clinical Medical Physics, 2005, 6, 33-43.	1.9	6
57	Dependence of fluence errors in dynamic IMRT on leaf-positional errors varying with time and leaf number. Medical Physics, 2003, 30, 2736-2749.	3.0	44