

Piotr Zygmanski

List of Publications by Year in descending order

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57
papers

1,033
citations

516215

16
h-index

433756

31
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57
all docs

57
docs citations

57
times ranked

1119
citing authors

#	ARTICLE	IF	CITATIONS
1	Targeted radiotherapy with gold nanoparticles: current status and future perspectives. <i>Nanomedicine</i> , 2014, 9, 1063-1082.	1.7	144
2	Dependence of Monte Carlo microdosimetric computations on the simulation geometry of gold nanoparticles. <i>Physics in Medicine and Biology</i> , 2013, 58, 7961-7977.	1.6	79
3	Impact of beam quality on megavoltage radiotherapy treatment techniques utilizing gold nanoparticles for dose enhancement. <i>Physics in Medicine and Biology</i> , 2013, 58, 451-464.	1.6	70
4	Flexible perovskite based X-ray detectors for dose monitoring in medical imaging applications. <i>Physics in Medicine</i> , 2018, 5, 20-23.	0.6	62
5	Nanoscale radiation transport and clinical beam modeling for gold nanoparticle dose enhanced radiotherapy (GNPT) using X-rays. <i>British Journal of Radiology</i> , 2016, 89, 20150200.	1.0	58
6	Angular dose dependency of MatriXX TM and its calibration. <i>Journal of Applied Clinical Medical Physics</i> , 2010, 11, 241-251.	0.8	55
7	LINAC based stereotactic radiosurgery for multiple brain metastases: guidance for clinical implementation. <i>Acta Oncologica</i> , 2019, 58, 1275-1282.	0.8	50
8	Dependence of fluence errors in dynamic IMRT on leaf-positional errors varying with time and leaf number. <i>Medical Physics</i> , 2003, 30, 2736-2749.	1.6	44
9	Evaluation of MatriXX for IMRT and VMAT dose verifications in peripheral dose regions. <i>Medical Physics</i> , 2010, 37, 3704-3714.	1.6	41
10	The effect of flattening filter free delivery on endothelial dose enhancement with gold nanoparticles. <i>Medical Physics</i> , 2013, 40, 031706.	1.6	32
11	Evaluation of radiation dose delivered by cone beam CT and tomosynthesis employed for setup of external breast irradiation. <i>Medical Physics</i> , 2009, 36, 164-173.	1.6	28
12	An MLC-based linac QA procedure for the characterization of radiation isocenter and room lasersâ€™ position. <i>Medical Physics</i> , 2006, 33, 1780-1787.	1.6	27
13	A stochastic model of cell survival for high-Z nanoparticle radiotherapy. <i>Medical Physics</i> , 2013, 40, 024102.	1.6	27
14	Spatial dependence of MLC transmission in IMRT delivery. <i>Physics in Medicine and Biology</i> , 2007, 52, 5985-5999.	1.6	24
15	Determination of depth and field size dependence of multileaf collimator transmission in intensityâ€™modulated radiation therapy beams. <i>Journal of Applied Clinical Medical Physics</i> , 2007, 8, 76-95.	0.8	24
16	An independent dose calculation algorithm for MLC-based radiotherapy including the spatial dependence of MLC transmission. <i>Physics in Medicine and Biology</i> , 2008, 53, 557-573.	1.6	23
17	An independent dose calculation algorithm for MLC-based stereotactic radiotherapy. <i>Medical Physics</i> , 2007, 34, 1605-1614.	1.6	18
18	An oscillating sweeping gap test for VMAT quality assurance. <i>Physics in Medicine and Biology</i> , 2010, 55, 5029-5044.	1.6	16

#	ARTICLE	IF	CITATIONS
19	New potential for enhancing concomitant chemoradiotherapy with FDA approved concentrations of cisplatin via the photoelectric effect. <i>Physica Medica</i> , 2015, 31, 25-30.	0.4	16
20	Angular dose anisotropy around gold nanoparticles exposed to X-rays. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2017, 13, 1653-1661.	1.7	14
21	A self-powered thin-film radiation detector using intrinsic high-energy current. <i>Medical Physics</i> , 2015, 43, 4-15.	1.6	13
22	The dichotomous nature of dose enhancement by gold nanoparticle aggregates in radiotherapy. <i>Nanomedicine</i> , 2018, 13, 809-823.	1.7	12
23	A volumetric-modulated arc therapy using sub-conformal dynamic arc with a monotonic dynamic multileaf collimator modulation. <i>Physics in Medicine and Biology</i> , 2008, 53, 6395-6417.	1.6	11
24	Evaluation of clip localization for different kilovoltage imaging modalities as applied to partial breast irradiation setup. <i>Medical Physics</i> , 2009, 36, 821-834.	1.6	11
25	Prototypes of self-powered radiation detectors employing intrinsic high-energy current. <i>Medical Physics</i> , 2015, 43, 16-22.	1.6	10
26	Dosimetric properties of high energy current (HEC) detector in keV x-ray beams. <i>Physics in Medicine and Biology</i> , 2015, 60, N121-N129.	1.6	9
27	Technical Note: Nanometric organic photovoltaic thin film detectors for dose monitoring in diagnostic x-ray imaging. <i>Medical Physics</i> , 2015, 42, 4027-4032.	1.6	9
28	Self-powered nano-porous aerogel x-ray sensor employing fast electron current. <i>Medical Physics</i> , 2019, 46, 4233-4240.	1.6	9
29	Optimal gantry angles and field sizes in kilovoltage cone-beam tomography for set-up of women with breast cancer undergoing radiotherapy treatment. <i>Radiotherapy and Oncology</i> , 2009, 93, 633-638.	0.3	8
30	Clinical application of Varian OBI CBCT system and dose reduction techniques in breast cancer patients setup. <i>Medical Physics</i> , 2010, 37, 2985-2998.	1.6	8
31	Dynamic IMRT Treatments of Sinus Region Tumors: Comparison of Monte Carlo Calculations with Treatment Planning System Calculations and Ion Chamber Measurements. <i>Technology in Cancer Research and Treatment</i> , 2006, 5, 489-495.	0.8	7
32	Maximum MLC opening effect in dynamic delivery of IMRT: leaf-positional analysis. <i>Journal of Applied Clinical Medical Physics</i> , 2005, 6, 33-43.	0.8	6
33	An EPID response calculation algorithm using spatial beam characteristics of primary, head scattered and MLC transmitted radiation. <i>Medical Physics</i> , 2008, 35, 2224-2234.	1.6	6
34	Optimal parameters for clinical implementation of breast cancer patient setup using Varian DTS software. <i>Journal of Applied Clinical Medical Physics</i> , 2012, 13, 60-73.	0.8	6
35	Effective Contact Potential of Thin Film Metal-Insulator Nanostructures and Its Role in Self-Powered Nanofilm X-ray Sensors. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 11258-11265.	4.0	6
36	Monte Carlo simulation of a prototypical patient dosimetry system for fluoroscopic procedures. <i>Physics in Medicine and Biology</i> , 2015, 60, 5891-5909.	1.6	5

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37	Nanoporous aerogel-based periodic high-energy electron current x-ray sensors. Journal Physics D: Applied Physics, 2020, 53, 265303.	1.3	5
38	Routine pretreatment patient-specific IMRT QA (PS-IMRT-QA) should be discontinued and replaced with a real-time on-board beam monitoring system (BMS). Medical Physics, 2021, 48, 4715-4718.	1.6	5
39	Stochastic triangulation for prostate positioning during radiotherapy using short CBCT arcs. Radiotherapy and Oncology, 2013, 106, 241-249.	0.3	4
40	Topological detector: measuring continuous dosimetric quantities with few-element detector array. Physics in Medicine and Biology, 2016, 61, N403-N414.	1.6	4
41	Selection of head and neck cancer patients for adaptive replanning of radiation treatment using kV-CBCT. Biomedical Physics and Engineering Express, 2018, 4, 055009.	0.6	4
42	3D printing for rapid prototyping of low-Z/density ionization chamber arrays. Medical Physics, 2019, 46, 5770-5779.	1.6	4
43	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.	0.4	3
44	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.	0.6	3
45	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.	1.6	3
46	Technical Report: Development and Implementation of an Open Source Template Interpretation Class Library for Automated Treatment Planning. Practical Radiation Oncology, 2022, 12, e153-e160.	1.1	3
47	CT reconstruction from few-views by Anisotropic Total Variation minimization. , 2012, , .		2
48	Bayesian Estimation Applied to Stochastic Localization with Constraints due to Interfaces and Boundaries. Mathematical Problems in Engineering, 2013, 2013, 1-17.	0.6	1
49	Signal enhancement due to high-Z nanofilm electrodes in parallel plate ionization chambers with variable microgaps. Medical Physics, 2017, 44, 6632-6640.	1.6	1
50	Self-powered multilayer radioisotope identification device. Medical Physics, 2021, 48, 1921-1930.	1.6	1
51	Remote sensing array (RSA) for linac beam monitoring. Physics in Medicine and Biology, 2022, , .	1.6	1
52	Resistive electrode array (REA) for radiotherapy beam monitoring and quality assurance. Physics in Medicine and Biology, 2022, 67, 135005.	1.6	1
53	Optimizing an analytical dose calculation algorithm for fast 2D calculations. Zeitschrift Fur Medizinische Physik, 2010, 20, 61-67.	0.6	0
54	Automation of clip localization in Digital Tomosynthesis for setup of breast cancer patients. Physica Medica, 2013, 29, 75-82.	0.4	0

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55	Technical Note: A novel interdigital transparent thin-film detector for medical dosimetry. Medical Physics, 2017, 44, 1969-1974.	1.6	0
56	Portal MV imaging with thin-film high-energy current X-ray detectors: A Monte Carlo study. Medical Physics, 2017, 44, 6128-6137.	1.6	0
57	SU-E-CAMPUS-I-01: Nanometric Organic Photovoltaic Thin Film X-Ray Detectors for Clinical KVp Beams. Medical Physics, 2014, 41, 384-385.	1.6	0