Jerry J Battista

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.

120 papers	3,726 citations	34 h-index	57 g-index
132 ext. papers	3,959 ext. citations	3.1 avg, IF	4.88 L-index

#	Paper	IF	Citations
120	COMP Report: An updated algorithm to estimate medical physics staffing levels for radiation oncology. *Journal of Applied Clinical Medical Physics*, **2021**, 22, 6-15	2.3	3
119	Technical Note: A fast inverse direct aperture optimization algorithm for volumetric-modulated arc therapy. *Medical Physics*, **2020**, 47, 1558-1565	4.4	1
118	Online daily assessment of dose change in head and neck radiotherapy without dose-recalculation. *Journal of Applied Clinical Medical Physics*, **2018**, 19, 659-665	2.3	3
117	Letter to the editor: medical physics workforce modelling: do we need what we want?. *Australasian Physical and Engineering Sciences in Medicine*, **2018**, 41, 567-568	1.9	2
116	Scanning laser optical computed tomography system for large volume 3D dosimetry. *Physics in Medicine and Biology*, **2017**, 62, 2636-2657	3.8	8
115	Technical Note: Evaluation of an iterative reconstruction algorithm for optical CT radiation dosimetry. *Medical Physics*, **2017**, 44, 6678-6689	4.4	6
114	Stray light in cone beam optical computed tomography: I. Measurement and reduction strategies with planar diffuse source. *Physics in Medicine and Biology*, **2016**, 61, 2893-909	3.8	7
113	Stray light in cone beam optical computed tomography: II. Reduction using a convergent light source. *Physics in Medicine and Biology*, **2016**, 61, 2910-25	3.8	12
112	Optical CT imaging of solid radiochromic dosimeters in mismatched refractive index solutions using a scanning laser and large area detector. *Medical Physics*, **2016**, 43, 4585	4.4	11
111	Dosimetric and radiobiological consequences of computed tomography-guided adaptive strategies for intensity modulated radiation therapy of the prostate. *International Journal of Radiation Oncology Biology Physics*, **2013**, 87, 874-80	4	11
110	Forcing lateral electron disequilibrium to spare lung tissue: a novel technique for stereotactic body radiation therapy of lung cancer. *Physics in Medicine and Biology*, **2013**, 58, 6641-62	3.8	7
109	Correction for 'artificial' electron disequilibrium due to cone-beam CT density errors: implications for on-line adaptive stereotactic body radiation therapy of lung. *Physics in Medicine and Biology*, **2013**, 58, 4157-74	3.8	11
108	Assessment and improvement of radiation oncology trainee contouring ability utilizing consensus-based penalty metrics. *Journal of Medical Imaging and Radiation Oncology*, **2012**, 56, 679-88	1.7	4
107	Categorizing segmentation quality using a quantitative quality assurance algorithm. *Journal of Medical Imaging and Radiation Oncology*, **2012**, 56, 668-78	1.7	4
106	An in-depth Monte Carlo study of lateral electron disequilibrium for small fields in ultra-low density lung: implications for modern radiation therapy. *Physics in Medicine and Biology*, **2012**, 57, 1543-59	3.8	23
105	Applying an animal model to quantify the uncertainties of an image-based 4D-CT algorithm. *Physics in Medicine and Biology*, **2012**, 57, 3571-84	3.8	1
104	Medical physics staffing for radiation oncology: a decade of experience in Ontario, Canada. *Journal of Applied Clinical Medical Physics*, **2012**, 13, 3704	2.3	21

103	Evaluation of inter-fraction prostate motion using kilovoltage cone beam computed tomography during radiotherapy. *Clinical Oncology*, **2011**, 23, 625-31	2.8	20
102	The effect of an inconsistent breathing amplitude on the relationship between an external marker and internal lung deformation in a porcine model. *Medical Physics*, **2010**, 37, 5951-60	4.4	5
101	Schedule for CT image guidance in treating prostate cancer with helical tomotherapy. *British Journal of Radiology*, **2010**, 83, 241-51	3.4	20
100	Feasibility study of multi-pass respiratory-gated helical tomotherapy of a moving target via binary MLC closure. *Physics in Medicine and Biology*, **2010**, 55, 6673-94	3.8	3
99	Effect of lateral target motion on image registration accuracy in CT-guided helical tomotherapy: a phantom study. *Journal of Medical Imaging and Radiation Oncology*, **2010**, 54, 280-6	1.7	4
98	Real-time fast inverse dose optimization for image guided adaptive radiation therapyEnhancements to fast inverse dose optimization (FIDO). *Journal of Applied Physics*, **2009**, 105, 102008	2.5	10
97	Motion-induced dose artifacts in helical tomotherapy. *Physics in Medicine and Biology*, **2009**, 54, 5707-34	3.8	21
96	The use of CT density changes at internal tissue interfaces to correlate internal organ motion with an external surrogate. *Physics in Medicine and Biology*, **2009**, 54, 259-73	3.8	12
95	CT imaging of human mummies: a critical review of the literature (19792005). *International Journal of Osteoarchaeology*, **2009**, 19, 90-98	1.1	23
94	A fully automated non-external marker 4D-CT sorting algorithm using a serial cine scanning protocol. *Physics in Medicine and Biology*, **2009**, 54, 2049-66	3.8	31
93	Three-dimensional dosimetry of small megavoltage radiation fields using radiochromic gels and optical CT scanning. *Physics in Medicine and Biology*, **2009**, 54, 2463-81	3.8	58
92	Radiochromic leuco dye micelle hydrogels: II. Low diffusion rate leuco crystal violet gel. *Physics in Medicine and Biology*, **2009**, 54, 6791-808	3.8	82
91	Scatter measurements for optical cone-beam computed tomography. *Journal of Physics: Conference Series*, **2009**, 164, 012028	0.3	2
90	Response to Comments on Ionization chamber volume determination and quality assurance using micro-CT imaging *Physics in Medicine and Biology*, **2009**, 54, 29-30	3.8	1
89	Consistency check of planned adaptive option on helical tomotherapy. *Technology in Cancer Research and Treatment*, **2008**, 7, 425-32	2.7	7
88	Fundamental x-ray interaction limits in diagnostic imaging detectors: frequency-dependent Swank noise. *Medical Physics*, **2008**, 35, 3194-204	4.4	28
87	An apparent threshold dose response in ferrous xylenol-orange gel dosimeters when scanned with a yellow light source. *Physics in Medicine and Biology*, **2008**, 53, 1637-50	3.8	39
86	Ionization chamber volume determination and quality assurance using micro-CT imaging. *Physics in Medicine and Biology*, **2008**, 53, 5029-43	3.8	6

85	Fundamental x-ray interaction limits in diagnostic imaging detectors: spatial resolution. *Medical Physics*, **2008**, 35, 3180-93	4.4	34
84	Experience-driven dose-volume histogram maps of NTCP risk as an aid for radiation treatment plan selection and optimization. *Medical Physics*, **2008**, 35, 333-43	4.4	14
83	Three-dimensional dose verification for intensity-modulated radiation therapy in the radiological physics centre head-and-neck phantom using optical computed tomography scans of ferrous xylenol-orange gel dosimeters. *International Journal of Radiation Oncology Biology Physics*, **2008**, 70, 1281-91	4	64
82	A prospective evaluation of helical tomotherapy. *International Journal of Radiation Oncology Biology Physics*, **2007**, 68, 632-41	4	46
81	Delineation of moving targets with slow MVCT scans: implications for adaptive non-gated lung tomotherapy. *Physics in Medicine and Biology*, **2007**, 52, 1119-34	3.8	19
80	3D thoracoscopic ultrasound volume measurement validation in an ex vivo and in vivo porcine model of lung tumours. *Physics in Medicine and Biology*, **2007**, 52, 91-106	3.8	10
79	Dosimetric evaluation of daily rigid and nonrigid geometric correction strategies during on-line image-guided radiation therapy (IGRT) of prostate cancer. *Medical Physics*, **2007**, 34, 352-65	4.4	40
78	SU-DD-A3-01: Dosimetric Evaluation of Daily Rigid and Non-Rigid Geometric Correction Strategies During On-Line Image-Guided Radiation Therapy (IGRT) of Prostate Cancer. *Medical Physics*, **2007**, 34, 2327-2328	4.4	1
77	SU-FF-T-117: Comparison of 3D Dose Measurements in Ferrous Xylenol Orange Gels with Mapcheck Diode Array and Pinnacle3 Dose Calculations. *Medical Physics*, **2007**, 34, 2428-2428	4.4	1
76	Signal and noise transfer properties of photoelectric interactions in diagnostic x-ray imaging detectors. *Medical Physics*, **2006**, 33, 3601-20	4.4	35
75	The response of prototype plane-parallel ionization chambers in small megavoltage x-ray fields. *Medical Physics*, **2006**, 33, 3997-4004	4.4	5
74	Linearity and image uniformity of the VistaTMoptical cone beam scanner. *Journal of Physics: Conference Series*, **2006**, 56, 217-220	0.3	17
73	Evaluation of image-guided radiation therapy (IGRT) technologies and their impact on the outcomes of hypofractionated prostate cancer treatments: a radiobiologic analysis. *International Journal of Radiation Oncology Biology Physics*, **2006**, 64, 289-300	4	59
72	Prostate contouring uncertainty in megavoltage computed tomography images acquired with a helical tomotherapy unit during image-guided radiation therapy. *International Journal of Radiation Oncology Biology Physics*, **2006**, 65, 595-607	4	63
71	TH-D-ValA-01: Preliminary Investigation of Multi-Pass Respiratory Gated Helical Tomotherapy (MRG-HT). *Medical Physics*, **2006**, 33, 2285-2285	4.4	3
70	Magnetic resonance imaging for adaptive cobalt tomotherapy: A proposal. *Journal of Medical Physics*, **2006**, 31, 242-54	0.7	28
69	TH-C-ValB-01: Prostate Contouring Uncertainty in Mega-Voltage Computed Tomography (MVCT) Images Acquired with a Helical Tomotherapy Unit During Image-Guided Radiation Therapy (IGRT). *Medical Physics*, **2006**, 33, 2267-2268	4.4	
68	WE-C-ValA-03: The Use of CT Density Changes at Internal Tissue Interfaces to Monitor Respiratory Induced Lung Tumor Motion. *Medical Physics*, **2006**, 33, 2232-2232	4.4	

67	SU-FF-T-175: Dose Rate Optimization for Intensity-Modulated Arc Therapy. *Medical Physics*, **2006**, 33, 2089-2089	4.4	
66	Sci-Sat AM (2) Therapy-06: Clinical experience with adaptive radiation therapy for lung cancer with tomotherapy. *Medical Physics*, **2006**, 33, 2675-2675	4.4	
65	Dosimetric impact of image-guided 3D conformal radiation therapy of prostate cancer. *Physics in Medicine and Biology*, **2005**, 50, 3083-101	3.8	64
64	Impact of geometric uncertainties on evaluation of treatment techniques for prostate cancer. *International Journal of Radiation Oncology Biology Physics*, **2005**, 62, 426-36	4	14
63	Investigation of dose homogeneity for loose helical tomotherapy delivery in the context of breath-hold radiation therapy. *Physics in Medicine and Biology*, **2005**, 50, 2387-404	3.8	11
62	Image-guided adaptive radiation therapy (IGART): Radiobiological and dose escalation considerations for localized carcinoma of the prostate. *Medical Physics*, **2005**, 32, 2193-203	4.4	43
61	Feasibility of a fast inverse dose optimization algorithm for IMRT via matrix inversion without negative beamlet intensities. *Medical Physics*, **2005**, 32, 3007-16	4.4	11
60	Validation of contour-driven thin-plate splines for tracking fraction-to-fraction changes in anatomy and radiation therapy dose mapping. *Physics in Medicine and Biology*, **2005**, 50, 459-75	3.8	27
59	SU-FF-J-05: A Novel 4-D CT Acquisition Protocol to Validate Respiratory Gating with the RPM System. *Medical Physics*, **2005**, 32, 1920-1920	4.4	1
58	SU-EE-A3-01: Evaluation of Image-Guided Radiation Therapy (IGRT) Technology and Their Impact On the Outcome of Hypofractionated Prostate Cancer Treatments: A Radiobiological Analysis. *Medical Physics*, **2005**, 32, 1898-1899	4.4	
57	WE-D-T-617-02: The Dose Response of Radiochromic Gel Dosimeters: Dose Fractionation Effects. *Medical Physics*, **2005**, 32, 2136-2137	4.4	
56	SU-FF-J-66: Iso-NTCP Dose Escalation with Image-Guided Adaptive Radiation Therapy (IGART) for Localized Carcinoma of the Prostate. *Medical Physics*, **2005**, 32, 1935-1935	4.4	
55	SU-FF-T-250: Small Field Dosimetry Using a Series of Customized Exradin T11 Prototype Ion Chambers: Under-Response Due to Electron Fluence Perturbations. *Medical Physics*, **2005**, 32, 2007-2007	4.4	
54	Limitations of a convolution method for modeling geometric uncertainties in radiation therapy: the radiobiological dose-per-fraction effect. *Medical Physics*, **2004**, 31, 3034-45	4.4	19
53	Tracking the dose distribution in radiation therapy by accounting for variable anatomy. *Physics in Medicine and Biology*, **2004**, 49, 791-805	3.8	119
52	Radiation treatment of lung cancer--patterns of practice in Canada. *Radiotherapy and Oncology*, **2004**, 71, 167-74	5.3	14
51	Fundamental limitations imposed by x-ray interactions on the modulation transfer function of existing x-ray detectors **2003**,		3
50	The impact of geometric uncertainty on hypofractionated external beam radiation therapy of prostate cancer. *International Journal of Radiation Oncology Biology Physics*, **2003**, 57, 833-42	4	26

49	Limitations of a convolution method for modeling geometric uncertainties in radiation therapy. I. The effect of shift invariance. *Medical Physics*, **2003**, 30, 2001-11	4.4	75
48	The influence of brachytherapy dose heterogeneity on estimates of alpha/beta for prostate cancer. *Physics in Medicine and Biology*, **2003**, 48, 507-22	3.8	24
47	Limitations of a convolution method for modeling geometric uncertainties in radiation therapy. II. The effect of a finite number of fractions. *Medical Physics*, **2003**, 30, 2012-20	4.4	44
46	A systematic study of imaging uncertainties and their impact on 125I prostate brachytherapy dose evaluation. *Medical Physics*, **2003**, 30, 1897-908	4.4	34
45	Improving the consistency in cervical esophageal target volume definition by special training. *International Journal of Radiation Oncology Biology Physics*, **2002**, 53, 766-74	4	31
44	Monte Carlo simulations and measurement of DNA damage from x-ray-triggered auger cascades in iododeoxyuridine (IUdR). *Radiation and Environmental Biophysics*, **2001**, 40, 199-206	2	23
43	Considerations for the implementation of target volume protocols in radiation therapy. *International Journal of Radiation Oncology Biology Physics*, **2001**, 49, 241-50	4	31
42	Operational characteristics of a prototype x-ray needle device. *Physics in Medicine and Biology*, **2001** , 46, 97-106	3.8	11
41	The effect of seed anisotrophy on brachytherapy dose distributions using 125I and 103Pd. *Medical Physics*, **2001**, 28, 336-45	4.4	14
40	A two-source model for electron beams: calculation of relative output factors. *Medical Physics*, **2001**, 28, 1735-45	4.4	18
39	Radiation treatment for cervical esophagus: patterns of practice study in Canada, 1996. *International Journal of Radiation Oncology Biology Physics*, **2000**, 47, 703-12	4	8
38	In-field and out-of-field effects in partial volume lung irradiation in rodents: possible correlation between early dna damage and functional endpoints. *International Journal of Radiation Oncology Biology Physics*, **2000**, 48, 1539-48	4	43
37	Normal tissue complication probabilities: dependence on choice of biological model and dose-volume histogram reduction scheme. *International Journal of Radiation Oncology Biology Physics*, **2000**, 46, 983-93	4	38
36	Cavity theory applied to the dosimetry of systemic radiotherapy of bone metastases. *Physics in Medicine and Biology*, **2000**, 45, 879-96	3.8	6
35	Polyvinyl alcohol-Fricke hydrogel and cryogel: two new gel dosimetry systems with low Fe3+ diffusion. *Physics in Medicine and Biology*, **2000**, 45, 955-69	3.8	89
34	Limitations in using dose-volume histograms for radiotherapy dose optimization **2000**, 239-241		2
33	Optimal photon energies for IUdR K-edge radiosensitization with filtered x-ray and radioisotope sources. *Physics in Medicine and Biology*, **1999**, 44, 2537-49	3.8	31
32	Feasibility of reading LiF thermoluminescent dosimeters by electron spin resonance. *Physics in Medicine and Biology*, **1999**, 44, 2063-9	3.8	

31	Variability of target volume delineation in cervical esophageal cancer. *International Journal of Radiation Oncology Biology Physics*, **1998**, 42, 277-88	4	92
30	Optical CT reconstruction of 3D dose distributions using the ferrous-benzoic-xylenol (FBX) gel dosimeter. *Medical Physics*, **1998**, 25, 1741-50	4.4	153
29	Analysis of the radiobiology of ytterbium-169 and iodine-125 permanent brachytherapy implants. *Physics in Medicine and Biology*, **1997**, 42, 1727-36	3.8	22
28	Monte Carlo studies of x-ray energy absorption and quantum noise in megavoltage transmission radiography. *Medical Physics*, **1995**, 22, 1077-88	4.4	68
27	Extrafocal radiation: a unified approach to the prediction of beam penumbra and output factors for megavoltage x-ray beams. *Medical Physics*, **1995**, 22, 2065-74	4.4	81
26	Dose distributions and dose rate constants for new ytterbium-169 brachytherapy seeds. *Medical Physics*, **1995**, 22, 89-96	4.4	23
25	Radiation dosimetry in human bone using electron paramagnetic resonance. *Physics in Medicine and Biology*, **1995**, 40, 2065-77	3.8	24
24	Inclusion of energy straggling in a numerical method for electron dose calculation. *Medical Physics*, **1994**, 21, 1591-8	4.4	8
23	Radiance and particle fluence. *Physics in Medicine and Biology*, **1994**, 39, 1053-62	3.8	14
22	X-ray sources of medical linear accelerators: focal and extra-focal radiation. *Medical Physics*, **1993**, 20, 1417-27	4.4	156
21	Dose calculations using convolution and superposition principles: the orientation of dose spread kernels in divergent x-ray beams. *Medical Physics*, **1993**, 20, 1685-94	4.4	43
20	Ytterbium-169: calculated physical properties of a new radiation source for brachytherapy. *Medical Physics*, **1992**, 19, 695-703	4.4	48
19	Activity distribution of a cobalt-60 teletherapy source. *Medical Physics*, **1991**, 18, 288-91	4.4	5
18	Computerized tomography versus perfusion lung scanning in canine radiation lung injury. *International Journal of Radiation Oncology Biology Physics*, **1990**, 18, 577-82	4	7
17	Comparison of methods to determine electron pencil beam spread in tissue-equivalent media. *Medical Physics*, **1989**, 16, 881-8	4.4	5
16	Experimental evaluation of a 2D and 3D electron pencil beam algorithm. *Physics in Medicine and Biology*, **1989**, 34, 1179-1194	3.8	48
15	Generation of photon energy deposition kernels using the EGS Monte Carlo code. *Physics in Medicine and Biology*, **1988**, 33, 1-20	3.8	203
14	Acquisition and display of radiation dose distributions using microcomputer technology. *Medical Physics*, **1988**, 15, 924-9	4.4	1

13	Performance evaluation of density measurements of axial and peripheral bone with x-ray and gamma-ray computed tomography. *Physics in Medicine and Biology*, **1987**, 32, 1393-406	3.8	20
12	Electron dose distributions in experimental phantoms: a comparison with 2D pencil beam calculations. *Physics in Medicine and Biology*, **1987**, 32, 1073-86	3.8	61
11	Accuracy of lung dose calculations for large-field irradiation with 6-MV x rays. *Medical Physics*, **1986**, 13, 111-6	4.4	15
10	Lung dose corrections for 6- and 15-MV x rays. *Medical Physics*, **1985**, 12, 327-32	4.4	92
9	A convolution method of calculating dose for 15-MV x rays. *Medical Physics*, **1985**, 12, 188-96	4.4	403
8	On technical specifications of radiotherapy simulators. *Medical Physics*, **1984**, 11, 341-3	4.4	1
7	Improved lung dose calculation using tissue-maximum ratios in the Batho correction. *Medical Physics*, **1984**, 11, 279-86	4.4	38
6	The density of mouse lung in vivo following X irradiation. *International Journal of Radiation Oncology Biology Physics*, **1983**, 9, 853-8	4	24
5	Compton scatter imaging of transverse sections: an overall appraisal and evaluation for radiotherapy planning. *Physics in Medicine and Biology*, **1981**, 26, 81-99	3.8	63
4	Computed tomography for radiotherapy planning. *International Journal of Radiation Oncology Biology Physics*, **1980**, 6, 99-107	4	66
3	On the impact of CT scanning on radiotherapy planning. *Computerized Tomography*, **1980**, 4, 55-65		17
2	Compton-scatter tissue densitometry: calculation of single and multiple scatter photon fluences. *Physics in Medicine and Biology*, **1978**, 23, 1-23	3.8	39
1	Compton scatter imaging of transverse sections: corrections for multiple scatter and attenuation. *Physics in Medicine and Biology*, **1977**, 22, 229-44	3.8	55