

Hugo Bouchard

List of Publications by Year in descending order

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Version: 2024-02-01

48
papers

1,511
citations

331670

21
h-index

315739

38
g-index

48
all docs

48
docs citations

48
times ranked

1282
citing authors

#	ARTICLE	IF	CITATIONS
1	A probabilistic approach for determining Monte Carlo beam source parameters: I. Modeling of a CyberKnife M6 unit. <i>Physics in Medicine and Biology</i> , 2022, 67, 045007.	3.0	2
2	Efficient dose-rate correction of silicon diode relative dose measurements. <i>Medical Physics</i> , 2022, 49, 4056-4070.	3.0	2
3	Eigencolor radiochromic film dosimetry. <i>Medical Physics</i> , 2021, 48, 2592-2603.	3.0	2
4	Monte Carlo calculation of detector perturbation and quality correction factors in a 1.5 T magnetic resonance guided radiation therapy small photon beams. <i>Physics in Medicine and Biology</i> , 2021, 66, 225004.	3.0	7
5	Small-cavity chamber dose response in megavoltage photon beams coupled to magnetic fields. <i>Physics in Medicine and Biology</i> , 2020, 65, 245008.	3.0	10
6	Electron density and effective atomic number estimation in a maximum a posteriori framework for dual-energy computed tomography. <i>Medical Physics</i> , 2020, 47, 4137-4149.	3.0	11
7	Parametrization of multi-energy CT projection data with eigentissue decomposition. <i>Physics in Medicine and Biology</i> , 2020, 65, 155001.	3.0	2
8	Alanine dosimetry in strong magnetic fields: use as a transfer standard in MRI-guided radiotherapy. <i>Physics in Medicine and Biology</i> , 2020, 65, 115001.	3.0	13
9	Quantitative imaging performance of MARS spectral photon-counting CT for radiotherapy. <i>Medical Physics</i> , 2020, 47, 3423-3434.	3.0	13
10	Reference dosimetry of modulated and dynamic photon beams. <i>Physics in Medicine and Biology</i> , 2020, 65, 24TR05.	3.0	0
11	The influence of nuclear interactions on ionization chamber perturbation factors in proton beams: FLUKA simulations supported by a Fano test. <i>Medical Physics</i> , 2019, 46, 885-891.	3.0	18
12	The potential of photon-counting CT for quantitative contrast-enhanced imaging in radiotherapy. <i>Physics in Medicine and Biology</i> , 2019, 64, 115020.	3.0	12
13	Influence of intravenous contrast agent on dose calculation in proton therapy using dual energy CT. <i>Physics in Medicine and Biology</i> , 2019, 64, 125024.	3.0	14
14	The effect of magnetic field strength on the response of Gafchromic EBT-3 film. <i>Physics in Medicine and Biology</i> , 2019, 64, 06NT03.	3.0	23
15	Dosimetric impact of dual-energy CT tissue segmentation for low-energy prostate brachytherapy: a Monte Carlo study. <i>Physics in Medicine and Biology</i> , 2018, 63, 025013.	3.0	19
16	Robust quantitative contrast-enhanced dual-energy CT for radiotherapy applications. <i>Medical Physics</i> , 2018, 45, 3086-3096.	3.0	17
17	Efficiency improvement in proton dose calculations with an equivalent restricted stopping power formalism. <i>Physics in Medicine and Biology</i> , 2018, 63, 015019.	3.0	2
18	Experimental validation of two dual-energy CT methods for proton therapy using heterogeneous tissue samples. <i>Medical Physics</i> , 2018, 45, 48-59.	3.0	61

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19	The impact of dual- and multi-energy CT on proton pencil beam range uncertainties: a Monte Carlo study. <i>Physics in Medicine and Biology</i> , 2018, 63, 195012.	3.0	17
20	Optimized $\langle i \rangle / \langle l \rangle$ -values for use with the Bragg additivity rule and their impact on proton stopping power and range uncertainty. <i>Physics in Medicine and Biology</i> , 2018, 63, 165007.	3.0	31
21	Unsupervised classification of tissues composition for Monte Carlo dose calculation. <i>Physics in Medicine and Biology</i> , 2018, 63, 15NT01.	3.0	2
22	Comment on "Methodological accuracy of image-based electron density assessment using dual-energy computed tomography" [Med. Phys. 44 (6), 2429-2437 (2017)]. <i>Medical Physics</i> , 2018, 45, 2345-2348.	3.0	1
23	The potential of dual-energy CT to reduce proton beam range uncertainties. <i>Medical Physics</i> , 2017, 44, 2332-2344.	3.0	103
24	Assessing lung function using contrast-enhanced dual-energy computed tomography for potential applications in radiation therapy. <i>Medical Physics</i> , 2017, 44, 5260-5269.	3.0	23
25	A Bayesian approach to solve proton stopping powers from noisy multi-energy CT data. <i>Medical Physics</i> , 2017, 44, 5293-5302.	3.0	25
26	Extension of the Fermi-Eyges most-likely path in heterogeneous medium with prior knowledge information. <i>Physics in Medicine and Biology</i> , 2017, 62, 9207-9219.	3.0	14
27	A general method to derive tissue parameters for Monte Carlo dose calculation with multi-energy CT. <i>Physics in Medicine and Biology</i> , 2016, 61, 8044-8069.	3.0	57
28	Experimental and Monte Carlo studies of fluence corrections for graphite calorimetry in low- and high-energy clinical proton beams. <i>Medical Physics</i> , 2016, 43, 4122-4132.	3.0	16
29	Detector dose response in megavoltage small photon beams. I. Theoretical concepts. <i>Medical Physics</i> , 2015, 42, 6033-6047.	3.0	85
30	Lorentz force correction to the Boltzmann radiation transport equation and its implications for Monte Carlo algorithms. <i>Physics in Medicine and Biology</i> , 2015, 60, 4963-4971.	3.0	22
31	Detector dose response in megavoltage small photon beams. II. Pencil beam perturbation effects. <i>Medical Physics</i> , 2015, 42, 6048-6061.	3.0	54
32	Reference dosimetry in the presence of magnetic fields: conditions to validate Monte Carlo simulations. <i>Physics in Medicine and Biology</i> , 2015, 60, 6639-6654.	3.0	23
33	A theoretical comparison of tissue parameter extraction methods for dual energy computed tomography. <i>Medical Physics</i> , 2014, 41, 081905.	3.0	24
34	A stoichiometric calibration method for dual energy computed tomography. <i>Physics in Medicine and Biology</i> , 2014, 59, 2059-2088.	3.0	124
35	A Fano cavity test for Monte Carlo proton transport algorithms. <i>Medical Physics</i> , 2013, 41, 011706.	3.0	21
36	Comment on "Linearization of dose-response curve of the radiochromic film dosimetry system" [Med. Phys. 39(8), 4850-4857 (2012)]. <i>Medical Physics</i> , 2012, 39, 7171-7172.	3.0	1

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37	Reference dosimetry using radiochromic film. Journal of Applied Clinical Medical Physics, 2012, 13, 339-353.	1.9	37
38	Quality correction factors of composite IMRT beam deliveries: Theoretical considerations. Medical Physics, 2012, 39, 6885-6894.	3.0	4
39	A theoretical re-examination of Spencer's Attix cavity theory. Physics in Medicine and Biology, 2012, 57, 3333-3358.	3.0	18
40	On charged particle equilibrium violation in external photon fields. Medical Physics, 2012, 39, 1473-1480.	3.0	17
41	<scp>GPUMCD</scp>: A new GPU-oriented Monte Carlo dose calculation platform. Medical Physics, 2011, 38, 754-764.	3.0	181
42	Validation of an electron Monte Carlo dose calculation algorithm in the presence of heterogeneities using EGSnrc and radiochromic film measurements. Journal of Applied Clinical Medical Physics, 2011, 12, 2-14.	1.9	16
43	A Monte Carlo method to evaluate the impact of positioning errors on detector response and quality correction factors in nonstandard beams. Physics in Medicine and Biology, 2011, 56, 2617-2634.	3.0	21
44	Investigation of three radiation detectors for accurate measurement of absorbed dose in nonstandard fields. Medical Physics, 2010, 37, 2404-2413.	3.0	26
45	Technical Note: Potential errors in optical density measurements due to scanning side in EBT and EBT2 Gafchromic film dosimetry. Medical Physics, 2010, 37, 1565-1570.	3.0	48
46	Ionization chamber gradient effects in nonstandard beam configurations. Medical Physics, 2009, 36, 4654-4663.	3.0	72
47	On the characterization and uncertainty analysis of radiochromic film dosimetry. Medical Physics, 2009, 36, 1931-1946.	3.0	100
48	Ionization chamber-based reference dosimetry of intensity modulated radiation beams. Medical Physics, 2004, 31, 2454-2465.	3.0	100