

Hugo Bouchard

List of Publications by Citations

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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.

45
papers

1,155
citations

18
h-index

33
g-index

48
ext. papers

1,376
ext. citations

3.9
avg, IF

4.73
L-index

#	Paper	IF	Citations
45	GPUMCD: A new GPU-oriented Monte Carlo dose calculation platform. <i>Medical Physics</i> , 2011 , 38, 754-64	4.4	137
44	A stoichiometric calibration method for dual energy computed tomography. <i>Physics in Medicine and Biology</i> , 2014 , 59, 2059-88	3.8	96
43	Ionization chamber-based reference dosimetry of intensity modulated radiation beams. <i>Medical Physics</i> , 2004 , 31, 2454-65	4.4	86
42	On the characterization and uncertainty analysis of radiochromic film dosimetry. <i>Medical Physics</i> , 2009 , 36, 1931-46	4.4	84
41	The potential of dual-energy CT to reduce proton beam range uncertainties. <i>Medical Physics</i> , 2017 , 44, 2332-2344	4.4	74
40	Detector dose response in megavoltage small photon beams. I. Theoretical concepts. <i>Medical Physics</i> , 2015 , 42, 6033-47	4.4	70
39	Ionization chamber gradient effects in nonstandard beam configurations. <i>Medical Physics</i> , 2009 , 36, 4654-63	4.4	61
38	Experimental validation of two dual-energy CT methods for proton therapy using heterogeneous tissue samples. <i>Medical Physics</i> , 2018 , 45, 48-59	4.4	49
37	Potential errors in optical density measurements due to scanning side in EBT and EBT2 Gafchromic film dosimetry. <i>Medical Physics</i> , 2010 , 37, 1565-70	4.4	46
36	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	3.8	45
35	Detector dose response in megavoltage small photon beams. II. Pencil beam perturbation effects. <i>Medical Physics</i> , 2015 , 42, 6048-61	4.4	43
34	Reference dosimetry using radiochromic film. <i>Journal of Applied Clinical Medical Physics</i> , 2012 , 13, 3994	2.3	33
33	Investigation of three radiation detectors for accurate measurement of absorbed dose in nonstandard fields. <i>Medical Physics</i> , 2010 , 37, 2404-13	4.4	24
32	Optimized I-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	3.8	20
31	A Bayesian approach to solve proton stopping powers from noisy multi-energy CT data. <i>Medical Physics</i> , 2017 , 44, 5293-5302	4.4	20
30	A theoretical comparison of tissue parameter extraction methods for dual energy computed tomography. <i>Medical Physics</i> , 2014 , 41, 081905	4.4	19
29	A Monte Carlo method to evaluate the impact of positioning errors on detector response and quality correction factors in nonstandard beams. <i>Physics in Medicine and Biology</i> , 2011 , 56, 2617-34	3.8	19

28	Assessing lung function using contrast-enhanced dual-energy computed tomography for potential applications in radiation therapy. <i>Medical Physics</i> , 2017 , 44, 5260-5269	4.4	18
27	The effect of magnetic field strength on the response of Gafchromic EBT-3 film. <i>Physics in Medicine and Biology</i> , 2019 , 64, 06NT03	3.8	17
26	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, 4963-71	3.8	16
25	On charged particle equilibrium violation in external photon fields. <i>Medical Physics</i> , 2012 , 39, 1473-80	4.4	16
24	Reference dosimetry in the presence of magnetic fields: conditions to validate Monte Carlo simulations. <i>Physics in Medicine and Biology</i> , 2015 , 60, 6639-54	3.8	15
23	Validation of an electron Monte Carlo dose calculation algorithm in the presence of heterogeneities using EGSnrc and radiochromic film measurements. <i>Journal of Applied Clinical Medical Physics</i> , 2011 , 12, 3392	2.3	15
22	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	3.8	14
21	A theoretical re-examination of Spencer-Attix cavity theory. <i>Physics in Medicine and Biology</i> , 2012 , 57, 3333-58	3.8	14
20	A Fano cavity test for Monte Carlo proton transport algorithms. <i>Medical Physics</i> , 2014 , 41, 011706	4.4	14
19	Robust quantitative contrast-enhanced dual-energy CT for radiotherapy applications. <i>Medical Physics</i> , 2018 , 45, 3086-3096	4.4	13
18	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	3.8	12
17	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	3.8	11
16	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	3.8	10
15	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	4.4	8
14	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	4.4	8
13	The potential of photon-counting CT for quantitative contrast-enhanced imaging in radiotherapy. <i>Physics in Medicine and Biology</i> , 2019 , 64, 115020	3.8	7
12	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	3.8	5
11	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	4.4	4

10	Quantitative imaging performance of MARS spectral photon-counting CT for radiotherapy. <i>Medical Physics</i> , 2020 , 47, 3423-3434	4.4	3
9	Quality correction factors of composite IMRT beam deliveries: theoretical considerations. <i>Medical Physics</i> , 2012 , 39, 6885-94	4.4	3
8	Small-cavity chamber dose response in megavoltage photon beams coupled to magnetic fields. <i>Physics in Medicine and Biology</i> , 2020 , 65, 245008	3.8	2
7	Efficiency improvement in proton dose calculations with an equivalent restricted stopping power formalism. <i>Physics in Medicine and Biology</i> , 2017 , 63, 015019	3.8	1
6	Unsupervised classification of tissues composition for Monte Carlo dose calculation. <i>Physics in Medicine and Biology</i> , 2018 , 63, 15NT01	3.8	1
5	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	4.4	1
4	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, 7171-2; author reply 7173-4	4.4	1
3	Parametrization of multi-energy CT projection data with eigentissue decomposition. <i>Physics in Medicine and Biology</i> , 2020 , 65, 155001	3.8	0
2	Eigencolor radiochromic film dosimetry. <i>Medical Physics</i> , 2021 , 48, 2592-2603	4.4	0
1	Reference dosimetry of modulated and dynamic photon beams. <i>Physics in Medicine and Biology</i> , 2021 , 65, 24TR05	3.8	