

# Richard Castillo

## 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.

58

papers

2,226

citations

24

h-index

47

g-index

66

ext. papers

2,625

ext. citations

3.2

avg, IF

4.61

L-index

#	Paper	IF	Citations
58	A framework for evaluation of deformable image registration spatial accuracy using large landmark point sets. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 1849-70	3.8	402
57	Implementation and evaluation of various demons deformable image registration algorithms on a GPU. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, 207-19	3.8	182
56	Four-dimensional deformable image registration using trajectory modeling. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, 305-27	3.8	170
55	Attenuation correction of PET images with respiration-averaged CT images in PET/CT. <i>Journal of Nuclear Medicine</i> , <b>2005</b> , 46, 1481-7	8.9	160
54	Lung texture in serial thoracic computed tomography scans: correlation of radiomics-based features with radiation therapy dose and radiation pneumonitis development. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2015</b> , 91, 1048-56	4	139
53	Ventilation from four-dimensional computed tomography: density versus Jacobian methods. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, 4661-85	3.8	132
52	Use of 4-dimensional computed tomography-based ventilation imaging to correlate lung dose and function with clinical outcomes. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2013</b> , 86, 366-71	4	82
51	A reference dataset for deformable image registration spatial accuracy evaluation using the COPDgene study archive. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 2861-77	3.8	75
50	Hyperpolarized (3)He magnetic resonance imaging: comparison with four-dimensional x-ray computed tomography imaging in lung cancer. <i>Academic Radiology</i> , <b>2012</b> , 19, 1546-53	4.3	60
49	Use of weekly 4DCT-based ventilation maps to quantify changes in lung function for patients undergoing radiation therapy. <i>Medical Physics</i> , <b>2012</b> , 39, 289-98	4.4	55
48	Spatial correspondence of 4D CT ventilation and SPECT pulmonary perfusion defects in patients with malignant airway stenosis. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 1855-71	3.8	48
47	A learning-based automatic segmentation and quantification method on left ventricle in gated myocardial perfusion SPECT imaging: A feasibility study. <i>Journal of Nuclear Cardiology</i> , <b>2020</b> , 27, 976-987 <sup>2.1</sup>		46
46	[18F]-FDG uptake dose-response correlates with radiation pneumonitis in lung cancer patients. <i>Radiotherapy and Oncology</i> , <b>2012</b> , 104, 52-7	5.3	43
45	Quality assurance assessment of diagnostic and radiation therapy-simulation CT image registration for head and neck radiation therapy: anatomic region of interest-based comparison of rigid and deformable algorithms. <i>Radiology</i> , <b>2015</b> , 274, 752-63	20.5	42
44	Clinical validation of 4-dimensional computed tomography ventilation with pulmonary function test data. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2015</b> , 92, 423-9	4	42
43	Comparison of 4-dimensional computed tomography ventilation with nuclear medicine ventilation-perfusion imaging: a clinical validation study. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2014</b> , 89, 199-205	4	38
42	Modeling lung deformation: a combined deformable image registration method with spatially varying Young's modulus estimates. <i>Medical Physics</i> , <b>2013</b> , 40, 081902	4.4	36

41	Least median of squares filtering of locally optimal point matches for compressible flow image registration. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 4827-33	3.8	34
40	Pre-radiotherapy FDG PET predicts radiation pneumonitis in lung cancer. <i>Radiation Oncology</i> , <b>2014</b> , 9, 74	4.2	33
39	Novel method to calculate pulmonary compliance images in rodents from computed tomography acquired at constant pressures. <i>Physics in Medicine and Biology</i> , <b>2006</b> , 51, 1101-12	3.8	31
38	Evaluating the Toxicity Reduction With Computed Tomographic Ventilation Functional Avoidance Radiation Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2017</b> , 99, 325-333	4	30
37	Regional Lung Function Profiles of Stage I and III Lung Cancer Patients: An Evaluation for Functional Avoidance Radiation Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2016</b> , 95, 1273-80	4	30
36	Incorporation of pre-therapy F-FDG uptake data with CT texture features into a radiomics model for radiation pneumonitis diagnosis. <i>Medical Physics</i> , <b>2017</b> , 44, 3686-3694	4.4	28
35	Evaluating Which Dose-Function Metrics Are Most Critical for Functional-Guided Radiation Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2017</b> , 99, 202-209	4	26
34	The numerical stability of transformation-based CT ventilation. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2017</b> , 12, 569-580	3.9	21
33	Interim Analysis of a Two-Institution, Prospective Clinical Trial of 4DCT-Ventilation-based Functional Avoidance Radiation Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2018</b> , 102, 1357-1365	4	21
32	Proton therapy radiation pneumonitis local dose-response in esophagus cancer patients. <i>Radiotherapy and Oncology</i> , <b>2013</b> , 106, 124-9	5.3	18
31	Evaluation of 4D CT acquisition methods designed to reduce artifacts. <i>Journal of Applied Clinical Medical Physics</i> , <b>2015</b> , 16, 4949	2.3	18
30	Pre-Radiation Therapy Fluorine 18 Fluorodeoxyglucose PET Helps Identify Patients with Esophageal Cancer at High Risk for Radiation Pneumonitis. <i>Radiology</i> , <b>2015</b> , 275, 822-31	20.5	18
29	Reduction of pulmonary compliance found with high-resolution computed tomography in irradiated mice. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2007</b> , 67, 879-87	4	18
28	A complete 4DCT-ventilation functional avoidance virtual trial: Developing strategies for prospective clinical trials. <i>Journal of Applied Clinical Medical Physics</i> , <b>2017</b> , 18, 144-152	2.3	17
27	Functional-guided radiotherapy using knowledge-based planning. <i>Radiotherapy and Oncology</i> , <b>2018</b> , 129, 494-498	5.3	13
26	Computing global minimizers to a constrained B-spline image registration problem from optimal l1 perturbations to block match data. <i>Medical Physics</i> , <b>2014</b> , 41, 041904	4.4	13
25	Robust CT ventilation from the integral formulation of the Jacobian. <i>Medical Physics</i> , <b>2019</b> , 46, 2115-2125	4.4	12
24	Assessing the use of 4DCT-ventilation in pre-operative surgical lung cancer evaluation. <i>Medical Physics</i> , <b>2017</b> , 44, 200-208	4.4	10

23	Morphometry-based measurements of the structural response to whole-brain radiation. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2015</b> , 10, 393-401	3.9	10
22	Technical Note: Deriving ventilation imaging from 4DCT by deep convolutional neural network. <i>Medical Physics</i> , <b>2019</b> , 46, 2323-2329	4.4	10
21	Gemcitabine-induced radiation recall myositis in a patient with relapsed nasopharyngeal carcinoma. <i>Practical Radiation Oncology</i> , <b>2017</b> , 7, e19-e22	2.8	9
20	. <i>Journal of Medical and Biological Engineering</i> , <b>2014</b> , 34, 178	2.2	9
19	Assessment of a quantitative metric for 4D CT artifact evaluation by observer consensus. <i>Journal of Applied Clinical Medical Physics</i> , <b>2014</b> , 15, 4718	2.3	7
18	Evaluating Positron Emission Tomography-Based Functional Imaging Changes in the Heart After Chemo-Radiation for Patients With Lung Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2020</b> , 106, 1063-1070	4	6
17	Robust HU-based CT ventilation from an integrated mass conservation formulation. <i>Medical Physics</i> , <b>2019</b> , 46, 5036-5046	4.4	5
16	Deformable image registration for temporal subtraction of chest radiographs. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2014</b> , 9, 513-22	3.9	4
15	Characterizing Spatial Lung Function for Esophageal Cancer Patients Undergoing Radiation Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2019</b> , 103, 738-746	4	4
14	Severity of radiation pneumonitis, from clinical, dosimetric and biological features: a pilot study. <i>Radiation Oncology</i> , <b>2020</b> , 15, 246	4.2	3
13	Technical Note: On the spatial correlation between robust CT-ventilation methods and SPECT ventilation. <i>Medical Physics</i> , <b>2020</b> , 47, 5731-5738	4.4	3
12	Predictors of pneumonitis-free survival following lung stereotactic body radiation therapy. <i>Translational Lung Cancer Research</i> , <b>2019</b> , 8, 15-23	4.4	3
11	Using 4DCT-ventilation to characterize lung function changes for pediatric patients getting thoracic radiotherapy. <i>Journal of Applied Clinical Medical Physics</i> , <b>2018</b> , 19, 407-412	2.3	3
10	GPU-accelerated Block Matching Algorithm for Deformable Registration of Lung CT Images <b>2015</b> , 2015, 292-295		2
9	Automated identification and reduction of artifacts in cine four-dimensional computed tomography (4DCT) images using respiratory motion model. <i>International Journal of Computer Assisted Radiology and Surgery</i> , <b>2017</b> , 12, 1521-1532	3.9	1
8	Evaluation of image registration spatial accuracy using a Bayesian hierarchical model. <i>Biometrics</i> , <b>2014</b> , 70, 366-77	1.8	1
7	Quantifying pulmonary perfusion from noncontrast computed tomography. <i>Medical Physics</i> , <b>2021</b> , 48, 1804-1814	4.4	1
6	SU-C-18A-02: Image-Based Camera Tracking: Towards Registration of Endoscopic Video to CT. <i>Medical Physics</i> , <b>2014</b> , 41, 101-101	4.4	0

- 5 Functional avoidance-based intensity modulated proton therapy with 4DCT derived ventilation imaging for lung cancer. *Journal of Applied Clinical Medical Physics*, **2021**, 22, 276-285 2:3 ○
- 4 Characterizing spatial differences between SPECT-ventilation and SPECT-perfusion in patients with lung cancer undergoing radiotherapy. *Radiotherapy and Oncology*, **2021**, 160, 120-124 5:3 ○
- 3 Implementation of a Knowledge-Based Treatment Planning Model for Cardiac-Sparing Lung Radiation Therapy. *Advances in Radiation Oncology*, **2021**, 6, 100745 3:3 ○
- 2 Cardiac metabolic changes on F-positron emission tomography after thoracic radiotherapy predict for overall survival in esophageal cancer patients.. *Journal of Applied Clinical Medical Physics*, **2022**, e13552<sup>2,3</sup> ○
- 1 WE-C-BRA-06: In Vivo Detection of Proton End Range Effect in Human Lungs: Intra-Subject Dose Response Comparison. *Medical Physics*, **2012**, 39, 3947-3948 4:4