Richard Castillo

List of Publications by Year
in descending order

66	2,879	201385 27	168136 53
papers	citations	h-index	g-index

66	66	66	2439
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A framework for evaluation of deformable image registration spatial accuracy using large landmark point sets. Physics in Medicine and Biology, 2009, 54, 1849-1870.	1.6	489
2	Implementation and evaluation of various demons deformable image registration algorithms on a GPU. Physics in Medicine and Biology, 2010, 55, 207-219.	1.6	219
3	Four-dimensional deformable image registration using trajectory modeling. Physics in Medicine and Biology, 2010, 55, 305-327.	1.6	207
4	Lung Texture in Serial Thoracic Computed Tomography Scans: Correlation of Radiomics-based Features With Radiation Therapy Dose and Radiation Pneumonitis Development. International Journal of Radiation Oncology Biology Physics, 2015, 91, 1048-1056.	0.4	192
5	Attenuation correction of PET images with respiration-averaged CT images in PET/CT. Journal of Nuclear Medicine, 2005, 46, 1481-7.	2.8	164
6	Ventilation from four-dimensional computed tomography: density versus Jacobian methods. Physics in Medicine and Biology, 2010, 55, 4661-4685.	1.6	155
7	Use of 4-Dimensional Computed Tomography-Based Ventilation Imaging to Correlate Lung Dose and Function With Clinical Outcomes. International Journal of Radiation Oncology Biology Physics, 2013, 86, 366-371.	0.4	102
8	A reference dataset for deformable image registration spatial accuracy evaluation using the COPDgene study archive. Physics in Medicine and Biology, 2013, 58, 2861-2877.	1.6	97
9	Hyperpolarized 3He Magnetic Resonance Imaging. Academic Radiology, 2012, 19, 1546-1553.	1.3	78
10	A learning-based automatic segmentation and quantification method on left ventricle in gated myocardial perfusion SPECT imaging: A feasibility study. Journal of Nuclear Cardiology, 2020, 27, 976-987.	1.4	72
11	Use of weekly 4DCT-based ventilation maps to quantify changes in lung function for patients undergoing radiation therapy. Medical Physics, 2011, 39, 289-298.	1.6	64
12	Clinical Validation of 4-Dimensional Computed Tomography Ventilation With Pulmonary Function Test Data. International Journal of Radiation Oncology Biology Physics, 2015, 92, 423-429.	0.4	59
13	Quality Assurance Assessment of Diagnostic and Radiation Therapyâ€“Simulation CT Image Registration for Head and Neck Radiation Therapy: Anatomic Region of Interestâ€“based Comparison of Rigid and Deformable Algorithms. Radiology, 2015, 274, 752-763.	3.6	58
14	Spatial correspondence of 4D CT ventilation and SPECT pulmonary perfusion defects in patients with malignant airway stenosis. Physics in Medicine and Biology, 2012, 57, 1855-1871.	1.6	54
15	Evaluating the Toxicity Reduction With Computed Tomographic Ventilation Functional Avoidance Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 99, 325-333.	0.4	52
16	Comparison of 4-Dimensional Computed Tomography Ventilation With Nuclear Medicine Ventilation-Perfusion Imaging: A Clinical Validation Study. International Journal of Radiation Oncology Biology Physics, 2014, 89, 199-205.	0.4	50
17	[18F]-FDG uptake doseâ€“response correlates with radiation pneumonitis in lung cancer patients. Radiotherapy and Oncology, 2012, 104, 52-57.	0.3	49
18	Pre-radiotherapy FDG PET predicts radiation pneumonitis in lung cancer. Radiation Oncology, 2014, 9, 74.	1.2	45

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19	Evaluating Which Dose-Function Metrics Are Most Critical for Functional-Guided Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 99, 202-209.	0.4	45
20	Least median of squares filtering of locally optimal point matches for compressible flow image registration. Physics in Medicine and Biology, 2012, 57, 4827-4833.	1.6	41
21	Regional Lung Function Profiles of Stage I and III Lung Cancer Patients: An Evaluation for Functional Avoidance Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2016, 95, 1273-1280.	0.4	39
22	Modeling lung deformation: A combined deformable image registration method with spatially varying Young's modulus estimates. Medical Physics, 2013, 40, 081902.	1.6	38
23	Incorporation of pre-therapy ¹⁸ F-FDG uptake data with CT texture features into a radiomics model for radiation pneumonitis diagnosis. Medical Physics, 2017, 44, 3686-3694.	1.6	37
24	Novel method to calculate pulmonary compliance images in rodents from computed tomography acquired at constant pressures. Physics in Medicine and Biology, 2006, 51, 1101-1112.	1.6	33
25	Interim Analysis of a Two-Institution, Prospective Clinical Trial of 4DCT-Ventilation-based Functional Avoidance Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2018, 102, 1357-1365.	0.4	30
26	The numerical stability of transformation-based CT ventilation. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 569-580.	1.7	29
27	Preâ€“Radiation Therapy Fluorine 18 Fluorodeoxyglucose PET Helps Identify Patients with Esophageal Cancer at High Risk for Radiation Pneumonitis. Radiology, 2015, 275, 822-831.	3.6	28
28	A complete 4<scp>DCT</scp>â€ventilation functional avoidance virtual trial: Developing strategies for prospective clinical trials. Journal of Applied Clinical Medical Physics, 2017, 18, 144-152.	0.8	27
29	Evaluation of 4D CT acquisition methods designed to reduce artifacts. Journal of Applied Clinical Medical Physics, 2015, 16, 23-32.	0.8	25
30	Functional-guided radiotherapy using knowledge-based planning. Radiotherapy and Oncology, 2018, 129, 494-498.	0.3	24
31	Technical Note: Deriving ventilation imaging from 4DCTby deep convolutional neural network. Medical Physics, 2019, 46, 2323-2329.	1.6	23
32	Robust CT ventilation from the integral formulation of the Jacobian. Medical Physics, 2019, 46, 2115-2125.	1.6	22
33	Proton therapy radiation pneumonitis local doseâ€“response in esophagus cancer patients. Radiotherapy and Oncology, 2013, 106, 124-129.	0.3	21
34	Reduction of pulmonary compliance found with high-resolution computed tomography in irradiated mice. International Journal of Radiation Oncology Biology Physics, 2007, 67, 879-887.	0.4	20
35	Results of a Multi-Institutional Phase 2 Clinical Trial for 4DCT-Ventilation Functional Avoidance Thoracic Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2022, 112, 986-995.	0.4	19
36	Computing global minimizers to a constrained Bâ€spline image registration problem from optimal l₁ perturbations to block match data. Medical Physics, 2014, 41, 041904.	1.6	17

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37	Assessing the use of 4<scp>DCT</scp>â€ventilation in preâ€operative surgical lung cancer evaluation. Medical Physics, 2017, 44, 200-208.	1.6	12
38	Evaluating Positron Emission Tomography-Based Functional Imaging Changes in the Heart After Chemo-Radiation for Patients With Lung Cancer. International Journal of Radiation Oncology Biology Physics, 2020, 106, 1063-1070.	0.4	12
39	Gemcitabine-induced radiation recall myositis in a patient with relapsed nasopharyngeal carcinoma. Practical Radiation Oncology, 2017, 7, e19-e22.	1.1	11
40	Title is missing!. Journal of Medical and Biological Engineering, 2014, 34, 178.	1.0	11
41	Morphometry-based measurements of the structural response to whole-brain radiation. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 393-401.	1.7	10
42	Quantifying pulmonary perfusion from noncontrast computed tomography. Medical Physics, 2021, 48, 1804-1814.	1.6	10
43	2021 AAPM Equity, Diversity, and Inclusion Climate Survey Executive Summary. International Journal of Radiation Oncology Biology Physics, 2023, 116, 295-304.	0.4	10
44	Robust HUâ€based CT ventilation from an integrated mass conservation formulation. Medical Physics, 2019, 46, 5036-5046.	1.6	9
45	Characterizing Spatial Lung Function for Esophageal Cancer Patients Undergoing Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2019, 103, 738-746.	0.4	9
46	Severity of radiation pneumonitis, from clinical, dosimetric and biological features: a pilot study. Radiation Oncology, 2020, 15, 246.	1.2	9
47	Deformable image registration for temporal subtraction of chest radiographs. International Journal of Computer Assisted Radiology and Surgery, 2014, 9, 513-522.	1.7	8
48	Assessment of a quantitative metric for 4D CT artifact evaluation by observer consensus. Journal of Applied Clinical Medical Physics, 2014, 15, 190-201.	0.8	8
49	Predictors of pneumonitis-free survival following lung stereotactic body radiation therapy. Translational Lung Cancer Research, 2018, 8, 15-23.	1.3	5
50	Technical Note: On the spatial correlation between robust CTâ€ventilation methods and SPECT ventilation. Medical Physics, 2020, 47, 5731-5738.	1.6	5
51	Characterizing spatial differences between SPECT-ventilation and SPECT-perfusion in patients with lung cancer undergoing radiotherapy. Radiotherapy and Oncology, 2021, 160, 120-124.	0.3	5
52	Implementation of a Knowledge-Based Treatment Planning Model for Cardiac-Sparing Lung Radiation Therapy. Advances in Radiation Oncology, 2021, 6, 100745.	0.6	4
53	Using 4<scp>DCT</scp>â€ventilation to characterize lung function changes for pediatric patients getting thoracic radiotherapy. Journal of Applied Clinical Medical Physics, 2018, 19, 407-412.	0.8	3
54	Cardiac metabolic changes on ¹⁸Fâ€positron emission tomography after thoracic radiotherapy predict for overall survival in esophageal cancer patients. Journal of Applied Clinical Medical Physics, 2023, 24, e13552.	0.8	3

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55	Evaluation of image registration spatial accuracy using a Bayesian hierarchical model. Biometrics, 2014, 70, 366-377.	0.8	2
56	GPU-accelerated block matching algorithm for deformable registration of lung CT images. , 2015, 2015, 292-295.		2
57	Automated identification and reduction of artifacts in cine four-dimensional computed tomography (4DCT) images using respiratory motion model. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1521-1532.	1.7	2
58	A Novel Lung Function Imaging Modality for Surgical Lung Cancer Evaluation. International Journal of Radiation Oncology Biology Physics, 2016, 96, S46.	0.4	1
59	The Expanding Role of Physiologic Imaging in Radiation Oncology. International Journal of Radiation Oncology Biology Physics, 2018, 102, 694-697.	0.4	1
60	Functional avoidanceâ€based intensity modulated proton therapy with 4DCT derived ventilation imaging for lung cancer. Journal of Applied Clinical Medical Physics, 2021, 22, 276-285.	0.8	1
61	SU-C-18A-02: Image-Based Camera Tracking: Towards Registration of Endoscopic Video to CT. Medical Physics, 2014, 41, 101-101.	1.6	1
62	Changes in post-treatment cardiac PET avidity predict overall survival in lung cancer patients treated with chemoradiation: Secondary analysis of the ACRIN 6668/RTOG 0235 clinical trial. Radiotherapy and Oncology, 2022, 171, 22-24.	0.3	1
63	OC-0414: Assessing 4DCT-ventilation as a functional imaging modality for thoracic radiation therapy. Radiotherapy and Oncology, 2016, 119, S192-S193.	0.3	0
64	Evaluating Which Dose-Function Metrics Are Most Critical for Functional Guided Radiation Therapy with CT Ventilation Imaging. International Journal of Radiation Oncology Biology Physics, 2017, 99, E454-E455.	0.4	0
65	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.	1.6	0
66	SUâ€Eâ€â€251: Incorporation of Preâ€Therapy 18Fâ€FDG Uptake with CT Texture Features in a Predictive Model for Radiation Pneumonitis Development. Medical Physics, 2015, 42, 3324-3324.	1.6	0