

# Marco Riboldi

## 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.

119  
papers

1,985  
citations

25  
h-index

36  
g-index

127  
ext. papers

2,311  
ext. citations

3.3  
avg, IF

4.67  
L-index

#	Paper	IF	Citations
119	X-ray CT adaptation based on a 2D-3D deformable image registration framework using simulated in-room proton radiographies.. <i>Physics in Medicine and Biology</i> , <b>2022</b> ,	3.8	2
118	Offline and online LSTM networks for respiratory motion prediction in MR-guided radiotherapy.. <i>Physics in Medicine and Biology</i> , <b>2022</b> ,	3.8	2
117	Distant metastasis time to event analysis with CNNs in independent head and neck cancer cohorts. <i>Scientific Reports</i> , <b>2021</b> , 11, 6418	4.9	7
116	An MRI framework for respiratory motion modelling validation. <i>Journal of Medical Imaging and Radiation Oncology</i> , <b>2021</b> , 65, 337-344	1.7	2
115	Deformable image registration of the treatment planning CT with proton radiographies in perspective of adaptive proton therapy. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66, 045008	3.8	4
114	Integration of spatial distortion effects in a 4D computational phantom for simulation studies in extra-cranial MRI-guided radiation therapy: Initial results. <i>Medical Physics</i> , <b>2021</b> , 48, 1646-1660	4.4	1
113	Clinical practice vs. state-of-the-art research and future visions: Report on the 4D treatment planning workshop for particle therapy - Edition 2018 and 2019. <i>Physica Medica</i> , <b>2021</b> , 82, 54-63	2.7	5
112	Porcine lung phantom-based validation of estimated 4D-MRI using orthogonal cine imaging for low-field MR-Linacs. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66, 055006	3.8	2
111	Medical physics challenges in clinical MR-guided radiotherapy. <i>Radiation Oncology</i> , <b>2020</b> , 15, 93	4.2	41
110	Modeling RBE-weighted dose variations in irregularly moving abdominal targets treated with carbon ion beams. <i>Medical Physics</i> , <b>2020</b> , 47, 2768-2778	4.4	3
109	Patient-specific CT calibration based on ion radiography for different detector configurations in H, He and C ion pencil beam scanning. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 245014	3.8	4
108	Dosimetric impact of geometric distortions in an MRI-only proton therapy workflow for lung, liver and pancreas. <i>Zeitschrift Fur Medizinische Physik</i> , <b>2020</b> ,	7.6	1
107	Virtual 4DCT from 4DMRI for the management of respiratory motion in carbon ion therapy of abdominal tumors. <i>Medical Physics</i> , <b>2020</b> , 47, 909-916	4.4	11
106	Validation of a model for physical dose variations in irregularly moving targets treated with carbon ion beams. <i>Medical Physics</i> , <b>2019</b> , 46, 3663-3673	4.4	7
105	Theoretical tumor edge detection technique using multiple Bragg peak decomposition in carbon ion therapy. <i>Biomedical Physics and Engineering Express</i> , <b>2019</b> , 5, 067002	1.5	
104	Accuracy of low-dose proton CT image registration for pretreatment alignment verification in reference to planning proton CT. <i>Journal of Applied Clinical Medical Physics</i> , <b>2019</b> , 20, 83-90	2.3	6
103	A clustering approach to 4D MRI retrospective sorting for the investigation of different surrogates. <i>Physica Medica</i> , <b>2019</b> , 58, 107-113	2.7	9

102	Time-resolved volumetric MRI in MRI-guided radiotherapy: an in silico comparative analysis. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 185013	3.8	14
101	A 2D-3D Deformable Image Registration Framework for Proton Radiographies in Adaptive Radiation Therapy <b>2019</b> ,		2
100	A ROI-based global motion model established on 4DCT and 2D cine-MRI data for MRI-guidance in radiation therapy. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 045002	3.8	19
99	Feasibility study on 3D image reconstruction from 2D orthogonal cine-MRI for MRI-guided radiotherapy. <i>Journal of Medical Imaging and Radiation Oncology</i> , <b>2018</b> , 62, 389-400	1.7	25
98	Evaluation of target coverage and margins adequacy during CyberKnife Lung Optimized Treatment. <i>Medical Physics</i> , <b>2018</b> , 45, 1360-1368	4.4	10
97	A Hybrid Image Registration and Matching Framework for Real-Time Motion Tracking in MRI-Guided Radiotherapy. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2018</b> , 65, 131-139	5	25
96	Early tumor response prediction for lung cancer patients using novel longitudinal pattern features from sequential PET/CT image scans. <i>Physica Medica</i> , <b>2018</b> , 54, 21-29	2.7	26
95	MRI-guidance for motion management in external beam radiotherapy: current status and future challenges. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 22TR03	3.8	62
94	"Patient-specific validation of deformable image registration in radiation therapy: Overview and caveats". <i>Medical Physics</i> , <b>2018</b> , 45, e908-e922	4.4	47
93	Image-based retrospective 4D MRI in external beam radiotherapy: A comparative study with a digital phantom. <i>Medical Physics</i> , <b>2018</b> , 45, 3161-3172	4.4	16
92	Target position reproducibility in left-breast irradiation with deep inspiration breath-hold using multiple optical surface control points. <i>Journal of Applied Clinical Medical Physics</i> , <b>2018</b> , 19, 35-43	2.3	12
91	Atlas-based segmentation in breast cancer radiotherapy: Evaluation of specific and generic-purpose atlases. <i>Breast</i> , <b>2017</b> , 32, 44-52	3.6	29
90	Evaluation of residual abdominal tumour motion in carbon ion gated treatments through respiratory motion modelling. <i>Physica Medica</i> , <b>2017</b> , 34, 28-37	2.7	21
89	First clinical investigation of a 4D maximum likelihood reconstruction for 4D PET-based treatment verification in ion beam therapy. <i>Radiotherapy and Oncology</i> , <b>2017</b> , 123, 339-345	5.3	3
88	A tool for validating MRI-guided strategies: a digital breathing CT/MRI phantom of the abdominal site. <i>Medical and Biological Engineering and Computing</i> , <b>2017</b> , 55, 2001-2014	3.1	27
87	Examination of a deformable motion model for respiratory movements and 4D dose calculations using different driving surrogates. <i>Medical Physics</i> , <b>2017</b> , 44, 2066-2076	4.4	11
86	Intra-fraction respiratory motion and baseline drift during breast Helical Tomotherapy. <i>Radiotherapy and Oncology</i> , <b>2017</b> , 122, 79-86	5.3	20
85	Multimodal image registration for the identification of dominant intraprostatic lesion in high-precision radiotherapy treatments. <i>British Journal of Radiology</i> , <b>2017</b> , 90, 20170021	3.4	11

84	Automated identification of health appsRmedical specialties and promoters from the store webpages <b>2017</b> ,		5
83	e-Health solutions for better care: Characterization of health apps to extract meaningful information and support usersRchoices <b>2017</b> ,		6
82	Kinetic Models for Predicting Cervical Cancer Response to Radiation Therapy on Individual Basis Using Tumor Regression Measured In Vivo With Volumetric Imaging. <i>Technology in Cancer Research and Treatment</i> , <b>2016</b> , 15, 146-58	2.7	18
81	Modeling the Interplay Between Tumor Volume Regression and Oxygenation in Uterine Cervical Cancer During Radiotherapy Treatment. <i>IEEE Journal of Biomedical and Health Informatics</i> , <b>2016</b> , 20, 596-605	7.3	7
80	A sinogram warping strategy for pre-reconstruction 4D PET optimization. <i>Medical and Biological Engineering and Computing</i> , <b>2016</b> , 54, 535-46	3.1	8
79	Clinical evaluation of 4D PET motion compensation strategies for treatment verification in ion beam therapy. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 4141-55	3.8	6
78	MRI quantification of pancreas motion as a function of patient setup for particle therapy -a preliminary study. <i>Journal of Applied Clinical Medical Physics</i> , <b>2016</b> , 17, 60-75	2.3	17
77	4D ML reconstruction as a tool for volumetric PET-based treatment verification in ion beam radiotherapy. <i>Medical Physics</i> , <b>2016</b> , 43, 710-26	4.4	2
76	Phantom based evaluation of CT to CBCT image registration for proton therapy dose recalculation. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 595-613	3.8	38
75	Optimized PET imaging for 4D treatment planning in radiotherapy: the virtual 4D PET strategy. <i>Technology in Cancer Research and Treatment</i> , <b>2015</b> , 14, 99-110	2.7	6
74	Optimal marker placement in hadrontherapy: intelligent optimization strategies with augmented Lagrangian pattern search. <i>Journal of Biomedical Informatics</i> , <b>2015</b> , 53, 65-72	10.2	2
73	Magnetic resonance imaging-guided versus surrogate-based motion tracking in liver radiation therapy: a prospective comparative study. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2015</b> , 91, 840-8	4	34
72	Optical eye tracking system for real-time noninvasive tumor localization in external beam radiotherapy. <i>Medical Physics</i> , <b>2015</b> , 42, 2194-202	4.4	16
71	Liver 4DMRI: A retrospective image-based sorting method. <i>Medical Physics</i> , <b>2015</b> , 42, 4814-21	4.4	49
70	An image-based method to synchronize cone-beam CT and optical surface tracking. <i>Journal of Applied Clinical Medical Physics</i> , <b>2015</b> , 16, 5152	2.3	7
69	Quantification of lung tumor rotation with automated landmark extraction using orthogonal cine MRI images. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 7165-78	3.8	17
68	Investigating CT to CBCT image registration for head and neck proton therapy as a tool for daily dose recalculation. <i>Medical Physics</i> , <b>2015</b> , 42, 1354-66	4.4	86
67	Set-up errors in head and neck cancer patients treated with intensity modulated radiation therapy: Quantitative comparison between three-dimensional cone-beam CT and two-dimensional kilovoltage images. <i>Physica Medica</i> , <b>2015</b> , 31, 1015-1021	2.7	14

66	Image guided particle therapy in CNAO room 2: implementation and clinical validation. <i>Physica Medica</i> , <b>2015</b> , 31, 9-15	2.7	21
65	Surrogate-driven deformable motion model for organ motion tracking in particle radiation therapy. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 1565-82	3.8	17
64	Scan path optimization with/without clustering for active beam delivery in charged particle therapy. <i>Physica Medica</i> , <b>2015</b> , 31, 130-6	2.7	4
63	Contrast-enhanced proton radiography for patient set-up by using x-ray CT prior knowledge. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2014</b> , 90, 628-36	4	12
62	PET-CT scanner characterization for PET raw data use in biomedical research. <i>Computerized Medical Imaging and Graphics</i> , <b>2014</b> , 38, 358-68	7.6	7
61	Tumor tracking method based on a deformable 4D CT breathing motion model driven by an external surface surrogate. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2014</b> , 88, 182-8	4	40
60	Reproducibility of the external surface position in left-breast DIBH radiotherapy with spirometer-based monitoring. <i>Journal of Applied Clinical Medical Physics</i> , <b>2014</b> , 15, 4494	2.3	27
59	Response to: Reproducibility of the external surface position in left-breast DIBH radiotherapy with spirometer-based monitoring: methodological mistake. <i>Journal of Applied Clinical Medical Physics</i> , <b>2014</b> , 15, 401	2.3	4
58	Proposal of a 4D ML reconstruction strategy for PET-based treatment verification in ion beam radiotherapy <b>2014</b> ,		4
57	Projection-based deformable registration for tomographic imaging in ion beam therapy <b>2014</b> ,		1
56	Clinical investigations of a 4D ML reconstruction strategy for PET-based treatment verification in ion beam therapy <b>2014</b> ,		2
55	Regularization in deformable registration of biomedical images based on divergence and curl operators. <i>Methods of Information in Medicine</i> , <b>2014</b> , 53, 21-8	1.5	6
54	Commissioning of an integrated platform for time-resolved treatment delivery in scanned ion beam therapy by means of optical motion monitoring. <i>Technology in Cancer Research and Treatment</i> , <b>2014</b> , 13, 517-28	2.7	12
53	Dosimetric effects of residual uncertainties in carbon ion treatment of head chordoma. <i>Radiotherapy and Oncology</i> , <b>2014</b> , 113, 66-71	5.3	17
52	Commissioning and quality assurance of an integrated system for patient positioning and setup verification in particle therapy. <i>Technology in Cancer Research and Treatment</i> , <b>2014</b> , 13, 303-14	2.7	29
51	Advances in 4D treatment planning for scanned particle beam therapy - report of dedicated workshops. <i>Technology in Cancer Research and Treatment</i> , <b>2014</b> , 13, 485-95	2.7	11
50	Regional MLEM reconstruction strategy for PET-based treatment verification in ion beam radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 6979-95	3.8	6
49	Proton beam radiotherapy: report of the first ten patients treated at the "Centro Nazionale di Adroterapia Oncologica (CNAO)" for skull base and spine tumours. <i>Radiologia Medica</i> , <b>2014</b> , 119, 277-82	6.5	16

48	Tumor tracking based on correlation models in scanned ion beam therapy: an experimental study. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 4659-78	3.8	17
47	Real-time tumor tracking with an artificial neural networks-based method: a feasibility study. <i>Physica Medica</i> , <b>2013</b> , 29, 48-59	2.7	19
46	A comparative study between the imaging system and the optical tracking system in proton therapy at CNAO. <i>Journal of Radiation Research</i> , <b>2013</b> , 54 Suppl 1, i129-35	2.4	15
45	Scale invariant feature transform in adaptive radiation therapy: a tool for deformable image registration assessment and re-planning indication. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 287-99	3.8	53
44	Validation of automatic contour propagation for 4D treatment planning using multiple metrics. <i>Technology in Cancer Research and Treatment</i> , <b>2013</b> , 12, 501-10	2.7	14
43	Deep inspiration breath-hold technique guided by an opto- electronic system for extracranial stereotactic treatments. <i>Journal of Applied Clinical Medical Physics</i> , <b>2013</b> , 14, 4087	2.3	18
42	The role of regularization in deformable image registration for head and neck adaptive radiotherapy. <i>Technology in Cancer Research and Treatment</i> , <b>2013</b> , 12, 323-31	2.7	7
41	Quantification of organ motion based on an adaptive image-based scale invariant feature method. <i>Medical Physics</i> , <b>2013</b> , 40, 111701	4.4	18
40	An adaptive fuzzy prediction model for real time tumor tracking in radiotherapy via external surrogates. <i>Journal of Applied Clinical Medical Physics</i> , <b>2013</b> , 14, 4008	2.3	22
39	Automated fiducial localization in CT images based on surface processing and geometrical prior knowledge for radiotherapy applications. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2012</b> , 59, 2191-9	5	17
38	Comparison between infrared optical and stereoscopic X-ray technologies for patient setup in image guided stereotactic radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2012</b> , 82, 1706-14	4	7
37	Automatic segmentation and online virtualCT in head-and-neck adaptive radiation therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2012</b> , 84, e427-33	4	56
36	In regard to Yang et al. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2012</b> , 84, 304; author reply 304-5	4	1
35	Real-time tumour tracking in particle therapy: technological developments and future perspectives. <i>Lancet Oncology</i> , <b>2012</b> , 13, e383-91	21.7	73
34	Optical eye tracking system for noninvasive and automatic monitoring of eye position and movements in radiotherapy treatments of ocular tumors. <i>Applied Optics</i> , <b>2012</b> , 51, 2441-50	1.7	14
33	Robustness of external/internal correlation models for real-time tumor tracking to breathing motion variations. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 7053-74	3.8	19
32	Multi-dimensional respiratory motion tracking from markerless optical surface imaging based on deformable mesh registration. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 357-73	3.8	50
31	Scale Invariant Feature Transform as feature tracking method in 4D imaging: a feasibility study. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2012</b> , 2012, 6543-6	0.9	8



30	TU-A-BRA-08: Integration of Optical Tracking for Organ Motion Compensation in Scanned Ion-Beam Therapy. <i>Medical Physics</i> , <b>2012</b> , 39, 3889-3889	4.4	3
29	A multiple points method for 4D CT image sorting. <i>Medical Physics</i> , <b>2011</b> , 38, 656-67	4.4	37
28	Use of machine learning methods for prediction of acute toxicity in organs at risk following prostate radiotherapy. <i>Medical Physics</i> , <b>2011</b> , 38, 2859-67	4.4	41
27	Intra-fraction setup variability: IR optical localization vs. X-ray imaging in a hypofractionated patient population. <i>Radiation Oncology</i> , <b>2011</b> , 6, 38	4.2	15
26	Development and validation of a prototypal neural networks-based tumor tracking method. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2011</b> , 2011, 2780-3	0.9	
25	Uncertainties in lung motion prediction relying on external surrogate: a 4DCT study in regular vs. irregular breathers. <i>Technology in Cancer Research and Treatment</i> , <b>2010</b> , 9, 307-16	2.7	9
24	Targeting accuracy in real-time tumor tracking via external surrogates: a comparative study. <i>Technology in Cancer Research and Treatment</i> , <b>2010</b> , 9, 551-62	2.7	39
23	Extension of the NCAT phantom for the investigation of intra-fraction respiratory motion in IMRT using 4D Monte Carlo. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, 1475-90	3.8	20
22	Validation of an automatic contour propagation method for lung cancer 4D adaptive radiation therapy <b>2009</b> ,		6
21	Motion compensation in hand-held laser scanning for surface modeling in plastic and reconstructive surgery. <i>Annals of Biomedical Engineering</i> , <b>2009</b> , 37, 1877-85	4.7	15
20	Four-dimensional targeting error analysis in image-guided radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 5995-6008	3.8	20
19	Accuracy in breast shape alignment with 3D surface fitting algorithms. <i>Medical Physics</i> , <b>2009</b> , 36, 1193-8	4.4	13
18	Benefits of six degrees of freedom for optically driven patient set-up correction in SBRT. <i>Technology in Cancer Research and Treatment</i> , <b>2008</b> , 7, 187-95	2.7	6
17	Design and testing of a simulation framework for dosimetric motion studies integrating an anthropomorphic computational phantom into four-dimensional Monte Carlo. <i>Technology in Cancer Research and Treatment</i> , <b>2008</b> , 7, 449-56	2.7	6
16	Comparison of target registration errors for multiple image-guided techniques in accelerated partial breast irradiation. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2008</b> , 70, 1239-46	4	91
15	Integration of Enhanced Optical Tracking Techniques and Imaging in IGRT. <i>Journal of Radiation Research</i> , <b>2007</b> , 48 Suppl A, A61-74	2.4	29
14	Genetic evolutionary taboo search for optimal marker placement in infrared patient setup. <i>Physics in Medicine and Biology</i> , <b>2007</b> , 52, 5815-30	3.8	12
13	SU-FF-J-92: Dosimetric Impact of Motion Mitigation Strategies in the Irradiation of Moving Tumors: A 4D Monte Carlo Simulation Study. <i>Medical Physics</i> , <b>2007</b> , 34, 2389-2389	4.4	

12	SU-FF-J-98: A Feature Matching Approach for the Automatic Correlation of Internal and External Motion in Lung Tumors. <i>Medical Physics</i> , <b>2007</b> , 34, 2390-2391	4-4	
11	Robust frameless stereotactic localization in extra-cranial radiotherapy. <i>Medical Physics</i> , <b>2006</b> , 33, 1141-524	4-4	11
10	Patient set-up verification by infrared optical localization and body surface sensing in breast radiation therapy. <i>Radiotherapy and Oncology</i> , <b>2006</b> , 79, 170-8	5-3	22
9	3D optoelectronic analysis of interfractional patient setup variability in frameless extracranial stereotactic radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2006</b> , 64, 635-42	4	25
8	186. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2006</b> , 66, S103-S104	4	4
7	A neural network based method for optical patient set-up registration in breast radiotherapy. <i>Annals of Biomedical Engineering</i> , <b>2006</b> , 34, 677-86	4-7	6
6	MO-D-ValB-03: Genetic Evolutionary Taboo Search: A Novel Approach for Optimal Marker Placement in Infrared Patient Positioning. <i>Medical Physics</i> , <b>2006</b> , 33, 2161-2161	4-4	1
5	SU-FF-J-128: Uncertainties in Target Volume Surrogates in Image Guided External Beam Partial Breast Irradiation. <i>Medical Physics</i> , <b>2006</b> , 33, 2050-2050	4-4	
4	Enhanced surface registration techniques for patient positioning control in breast cancer radiotherapy. <i>Technology in Cancer Research and Treatment</i> , <b>2004</b> , 3, 51-8	2-7	14
3	Dosimetric effects within target and organs at risk of interfractional patient mispositioning in left breast cancer radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2004</b> , 59, 861-714	4	27
2	Extracranial frameless stereotactic radiosurgery with multi-modal imaging and opto-electronic position verification. <i>International Congress Series</i> , <b>2004</b> , 1268, 318-322		1
1	Evaluation of methods for opto-electronic body surface sensing applied to patient position control in breast radiation therapy. <i>Medical and Biological Engineering and Computing</i> , <b>2003</b> , 41, 679-88	3-1	19