

Per Rugaard Poulsen

List of Publications by Year in descending order

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102
papers

2,922
citations

126907

33
h-index

197818

49
g-index

102
all docs

102
docs citations

102
times ranked

1867
citing authors

#	ARTICLE	IF	CITATIONS
1	The first clinical implementation of electromagnetic transponder-guided MLC tracking. Medical Physics, 2014, 41, 020702.	3.0	137
2	Real-time intrafraction motion monitoring in external beam radiotherapy. Physics in Medicine and Biology, 2019, 64, 15TR01.	3.0	130
3	Gold nanoparticle single-electron transistor with carbon nanotube leads. Applied Physics Letters, 2001, 79, 2106-2108.	3.3	87
4	A method of dose reconstruction for moving targets compatible with dynamic treatments. Medical Physics, 2012, 39, 6237-6246.	3.0	86
5	Three-dimensional prostate position estimation with a single x-ray imager utilizing the spatial probability density. Physics in Medicine and Biology, 2008, 53, 4331-4353.	3.0	84
6	A Method to Estimate Mean Position, Motion Magnitude, Motion Correlation, and Trajectory of a Tumor From Cone-Beam CT Projections for Image-Guided Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2008, 72, 1587-1596.	0.8	82
7	A dosimetric comparison of real-time adaptive and non-adaptive radiotherapy: A multi-institutional study encompassing robotic, gimbaled, multileaf collimator and couch tracking. Radiotherapy and Oncology, 2016, 119, 159-165.	0.6	82
8	The first clinical treatment with kilovoltage intrafraction monitoring (KIM): A real-time image guidance method. Medical Physics, 2015, 42, 354-358.	3.0	71
9	Three-dimensional liver motion tracking using real-time two-dimensional MRI. Medical Physics, 2014, 41, 042302.	3.0	69
10	Dynamic Multileaf Collimator Tracking of Respiratory Target Motion Based on a Single Kilovoltage Imager During Arc Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2010, 77, 600-607.	0.8	63
11	4998-5005.	3.0	63
12	Real-time dynamic MLC tracking for inversely optimized arc radiotherapy. Radiotherapy and Oncology, 2010, 94, 218-223.	0.6	62
13	Implementation of a New Method for Dynamic Multileaf Collimator Tracking of Prostate Motion in Arc Radiotherapy Using a Single kV Imager. International Journal of Radiation Oncology Biology Physics, 2010, 76, 914-923.	0.8	59
14	The first clinical implementation of real-time image-guided adaptive radiotherapy using a standard linear accelerator. Radiotherapy and Oncology, 2018, 127, 6-11.	0.6	54
15	Real-time tumor tracking using sequential kV imaging combined with respiratory monitoring: a general framework applicable to commonly used IGRT systems. Physics in Medicine and Biology, 2010, 55, 3299-3316.	3.0	50
16	Dynamic MLC tracking of moving targets with a single kV imager for 3D conformal and IMRT treatments. Acta Oncologica, 2010, 49, 1092-1100.	1.8	50
17	Real-time prostate trajectory estimation with a single imager in arc radiotherapy: a simulation study. Physics in Medicine and Biology, 2009, 54, 4019-4035.	3.0	49
18	Dosimetric impact of respiratory motion, interfraction baseline shifts, and anatomical changes in radiotherapy of non-small cell lung cancer. Acta Oncologica, 2013, 52, 1490-1496.	1.8	49

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19	AAPM Task Group 264: The safe clinical implementation of MLC tracking in radiotherapy. <i>Medical Physics</i> , 2021, 48, e44-e64.	3.0	49
20	Image-Based Dynamic Multileaf Collimator Tracking of Moving Targets During Intensity-Modulated Arc Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 83, e265-e271.	0.8	48
21	Variations in magnitude and directionality of respiratory target motion throughout full treatment courses of stereotactic body radiotherapy for tumors in the liver. <i>Acta Oncologica</i> , 2013, 52, 1437-1444.	1.8	47
22	Kilovoltage intrafraction motion monitoring and target dose reconstruction for stereotactic volumetric modulated arc therapy of tumors in the liver. <i>Radiotherapy and Oncology</i> , 2014, 111, 424-430.	0.6	47
23	Review of Real-Time 3-Dimensional Image Guided Radiation Therapy on Standard-Equipped Cancer Radiation Therapy Systems: Are We at the Tipping Point for the Era of Real-Time Radiation Therapy?. <i>International Journal of Radiation Oncology Biology Physics</i> , 2018, 102, 922-931.	0.8	45
24	Residual set-up errors and margins in on-line image-guided prostate localization in radiotherapy. <i>Radiotherapy and Oncology</i> , 2007, 85, 201-206.	0.6	44
25	Real-Time Target Position Estimation Using Stereoscopic Kilovoltage/Megavoltage Imaging and External Respiratory Monitoring for Dynamic Multileaf Collimator Tracking. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011, 79, 269-278.	0.8	44
26	Respiratory gating based on internal electromagnetic motion monitoring during stereotactic liver radiation therapy: First results. <i>Acta Oncologica</i> , 2015, 54, 1445-1452.	1.8	43
27	Real-time estimation of prostate tumor rotation and translation with a kV imaging system based on an iterative closest point algorithm. <i>Physics in Medicine and Biology</i> , 2013, 58, 8517-8533.	3.0	42
28	Electromagnetic guided couch and multileaf collimator tracking on a TrueBeam accelerator. <i>Medical Physics</i> , 2016, 43, 2387-2398.	3.0	42
29	Robust automatic segmentation of multiple implanted cylindrical gold fiducial markers in cone-beam CT projections. <i>Medical Physics</i> , 2011, 38, 6351-6361.	3.0	39
30	Setup error and motion during deep inspiration breath-hold breast radiotherapy measured with continuous portal imaging. <i>Acta Oncologica</i> , 2016, 55, 193-200.	1.8	39
31	The first clinical implementation of a real-time six degree of freedom target tracking system during radiation therapy based on Kilovoltage Intrafraction Monitoring (KIM). <i>Radiotherapy and Oncology</i> , 2017, 123, 37-42.	0.6	39
32	See, Think, and Act: Real-Time Adaptive Radiotherapy. <i>Seminars in Radiation Oncology</i> , 2019, 29, 228-235.	2.2	37
33	Efficient Interplay Effect Mitigation for Proton Pencil Beam Scanning by Spot-Adapted Layered Repainting Evenly Spread out Over the Full Breathing Cycle. <i>International Journal of Radiation Oncology Biology Physics</i> , 2018, 100, 226-234.	0.8	35
34	Patterns of practice for adaptive and real-time radiation therapy (POP-ART RT) part I: Intra-fraction breathing motion management. <i>Radiotherapy and Oncology</i> , 2020, 153, 79-87.	0.6	34
35	A method for robust segmentation of arbitrarily shaped radiopaque structures in cone-beam CT projections. <i>Medical Physics</i> , 2011, 38, 2151-2156.	3.0	33
36	Online 4D ultrasound guidance for real-time motion compensation by MLC tracking. <i>Medical Physics</i> , 2016, 43, 5695-5704.	3.0	33

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37	Target position uncertainty during visually guided deep-inspiration breath-hold radiotherapy in locally advanced lung cancer. <i>Radiotherapy and Oncology</i> , 2017, 123, 78-84.	0.6	33
38	Challenges of radiotherapy: Report on the 4D treatment planning workshop 2013. <i>Physica Medica</i> , 2014, 30, 809-815.	0.7	32
39	Tracking latency in image-based dynamic MLC tracking with direct image access. <i>Acta OncolÃ³gica</i> , 2011, 50, 952-959.	1.8	31
40	Role of hydrogen surface coverage during anodic plasma deposition of hydrogenated nanocrystalline germanium. <i>Journal of Applied Physics</i> , 1998, 84, 3386-3391.	2.5	30
41	First online real-time evaluation of motion-induced 4D dose errors during radiotherapy delivery. <i>Medical Physics</i> , 2018, 45, 3893-3903.	3.0	29
42	Geometric accuracy of dynamic MLC tracking with an implantable wired electromagnetic transponder. <i>Acta OncolÃ³gica</i> , 2011, 50, 944-951.	1.8	28
43	Quality assurance for the clinical implementation of kilovoltage intrafraction monitoring for prostate cancer VMAT. <i>Medical Physics</i> , 2014, 41, 111712.	3.0	26
44	Time-resolved dose distributions to moving targets during volumetric modulated arc therapy with and without dynamic MLC tracking. <i>Medical Physics</i> , 2013, 40, 111723.	3.0	24
45	Fiducial marker guided stereotactic liver radiotherapy: Is a time delay between marker implantation and planning CT needed?. <i>Radiotherapy and Oncology</i> , 2016, 121, 75-78.	0.6	24
46	Cardiac and respiration induced motion of mediastinal lymph node targets in lung cancer patients throughout the radiotherapy treatment course. <i>Radiotherapy and Oncology</i> , 2016, 121, 52-58.	0.6	23
47	Dosimetric verification of complex radiotherapy with a 3D optically based dosimetry system: Dose painting and target tracking. <i>Acta OncolÃ³gica</i> , 2013, 52, 1445-1450.	1.8	22
48	Registration-Based Reconstruction of Four-Dimensional Cone Beam Computed Tomography. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 2064-2077.	8.9	21
49	A method for selection of beam angles robust to intra-fractional motion in proton therapy of lung cancer. <i>Acta OncolÃ³gica</i> , 2014, 53, 1058-1063.	1.8	21
50	First clinical real-time motion-including tumor dose reconstruction during radiotherapy delivery. <i>Radiotherapy and Oncology</i> , 2019, 139, 66-71.	0.6	21
51	A deep learning framework for automatic detection of arbitrarily shaped fiducial markers in intrafraction fluoroscopic images. <i>Medical Physics</i> , 2019, 46, 2286-2297.	3.0	21
52	An experimentally validated couch and MLC tracking simulator used to investigate hybrid couch-MLC tracking. <i>Medical Physics</i> , 2017, 44, 798-809.	3.0	20
53	Inter- and intra-fraction geometric errors in daily image-guided radiotherapy of free-breathing breast cancer patients measured with continuous portal imaging. <i>Acta OncolÃ³gica</i> , 2014, 53, 802-808.	1.8	19
54	Clinical validation of a 4D-CT based method for lung ventilation measurement in phantoms and patients. <i>Acta OncolÃ³gica</i> , 2011, 50, 897-907.	1.8	18

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55	The dosimetric impact of inversely optimized arc radiotherapy plan modulation for real-time dynamic MLC tracking delivery. <i>Medical Physics</i> , 2012, 39, 1588-1594.	3.0	18
56	Motion management during IMAT treatment of mobile lung tumors – A comparison of MLC tracking and gated delivery. <i>Medical Physics</i> , 2014, 41, 101707.	3.0	18
57	Setup strategies and uncertainties in esophageal radiotherapy based on detailed intra- and interfractional tumor motion mapping. <i>Radiotherapy and Oncology</i> , 2019, 136, 161-168.	0.6	18
58	MLC tracking for lung SABR is feasible, efficient and delivers high-precision target dose and lower normal tissue dose. <i>Radiotherapy and Oncology</i> , 2021, 155, 131-137.	0.6	18
59	Cone beam CT-based set-up strategies with and without rotational correction for stereotactic body radiation therapy in the liver. <i>Acta Oncologica</i> , 2017, 56, 860-866.	1.8	17
60	The accuracy and precision of Kilovoltage Intrafraction Monitoring (KIM) six degree-of-freedom prostate motion measurements during patient treatments. <i>Radiotherapy and Oncology</i> , 2018, 126, 236-243.	0.6	17
61	Intrafraction changes of prostate position and geometrical errors studied by continuous electronic portal imaging. <i>Acta Oncologica</i> , 2008, 47, 1351-1357.	1.8	16
62	Investigating multi-leaf collimator tracking in stereotactic arrhythmic radioablation (STAR) treatments for atrial fibrillation. <i>Physics in Medicine and Biology</i> , 2018, 63, 195008.	3.0	16
63	Geometric and dosimetric comparison of four intrafraction motion adaptation strategies for stereotactic liver radiotherapy. <i>Physics in Medicine and Biology</i> , 2018, 63, 145010.	3.0	16
64	Clinical use of iterative 4D-cone beam computed tomography reconstructions to investigate respiratory tumor motion in lung cancer patients. <i>Acta Oncologica</i> , 2014, 53, 1107-1113.	1.8	14
65	The accuracy and precision of the KIM motion monitoring system used in the multi-institutional TROG 15.01 Stereotactic Prostate Ablative Radiotherapy with KIM (SPARK) trial. <i>Medical Physics</i> , 2019, 46, 4725-4737.	3.0	14
66	Time-resolved dose reconstruction by motion encoding of volumetric modulated arc therapy fields delivered with and without dynamic multi-leaf collimator tracking. <i>Acta Oncologica</i> , 2013, 52, 1497-1503.	1.8	13
67	Volumetric modulated arc therapy with dynamic collimator rotation for improved multileaf collimator tracking of the prostate. <i>Radiotherapy and Oncology</i> , 2017, 122, 109-115.	0.6	13
68	Single-fraction prostate stereotactic body radiotherapy: Dose reconstruction with electromagnetic intrafraction motion tracking. <i>Radiotherapy and Oncology</i> , 2021, 156, 145-152.	0.6	13
69	Strategies for Motion Robust Proton Therapy With Pencil Beam Scanning for Esophageal Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021, 111, 539-548.	0.8	13
70	Time structure of pencil beam scanning proton FLASH beams measured with scintillator detectors and compared with log files. <i>Medical Physics</i> , 2022, 49, 1932-1943.	3.0	13
71	Accuracy of image-guided radiotherapy of prostate cancer based on the BeamCath® urethral catheter technique. <i>Radiotherapy and Oncology</i> , 2007, 83, 25-30.	0.6	11
72	Reconstruction of implanted marker trajectories from cone-beam CT projection images using interdimensional correlation modeling. <i>Medical Physics</i> , 2016, 43, 4643-4654.	3.0	11

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73	Dosimetric effect of intrafraction motion and different localization strategies in prostate SBRT. <i>Physica Medica</i> , 2020, 75, 58-68.	0.7	11
74	Potential improvements of lung and prostate MLC tracking investigated by treatment simulations. <i>Medical Physics</i> , 2018, 45, 2218-2229.	3.0	10
75	Is multileaf collimator tracking or gating a better intrafraction motion adaptation strategy? An analysis of the TROG 15.01 stereotactic prostate ablative radiotherapy with KIM (SPARK) trial. <i>Radiotherapy and Oncology</i> , 2020, 151, 234-241.	0.6	10
76	The impact of leaf width and plan complexity on DMLC tracking of prostate intensity modulated arc therapy. <i>Medical Physics</i> , 2013, 40, 111717.	3.0	9
77	Moving metal artifact reduction in cone-beam CT scans with implanted cylindrical gold markers. <i>Medical Physics</i> , 2014, 41, 121710.	3.0	9
78	Simulated real-time dose reconstruction for moving tumors in stereotactic liver radiotherapy. <i>Medical Physics</i> , 2019, 46, 4738-4748.	3.0	9
79	Fully automated detection of heart irradiation in cine MV images acquired during breast cancer radiotherapy. <i>Radiotherapy and Oncology</i> , 2020, 152, 189-195.	0.6	9
80	Simulated multileaf collimator tracking for stereotactic liver radiotherapy guided by kilovoltage intrafraction monitoring: Dosimetric gain and target overdose trends. <i>Radiotherapy and Oncology</i> , 2020, 144, 93-100.	0.6	8
81	Isotoxic dose prescription level strategies for stereotactic liver radiotherapy: the price of dose uniformity. <i>Acta Oncologica</i> , 2020, 59, 558-564.	1.8	7
82	Improved quality of intrafraction kilovoltage images by triggered readout of unexposed frames. <i>Medical Physics</i> , 2015, 42, 6549-6557.	3.0	6
83	Quantification of intrafraction prostate motion and its dosimetric effect on VMAT. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2017, 40, 317-324.	1.3	6
84	Rethink radiotherapy – BIGART 2017. <i>Acta Oncologica</i> , 2017, 56, 1341-1352.	1.8	6
85	Systematic intrafraction shifts of mediastinal lymph node targets between setup imaging and radiation treatment delivery in lung cancer patients. <i>Radiotherapy and Oncology</i> , 2018, 126, 318-324.	0.6	6
86	Simultaneous acquisition of 4D ultrasound and wireless electromagnetic tracking for <i>in-vivo</i> accuracy validation. <i>Current Directions in Biomedical Engineering</i> , 2017, 3, 75-78.	0.4	5
87	Dosimetric impact of intrafraction prostate rotation and accuracy of gating, multi-leaf collimator tracking and couch tracking to manage rotation: An end-to-end validation using volumetric film measurements. <i>Radiotherapy and Oncology</i> , 2021, 156, 10-18.	0.6	5
88	Self-organization of Te clusters in nanofilm by low energy beam deposition. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 244, 407-412.	2.1	4
89	The adsorption position of Hg on Ni(100): a transmission channeling study. <i>Surface Science</i> , 1994, 310, L589-L594.	1.9	3
90	Adapting to the motion of multiple independent targets using multileaf collimator tracking for locally advanced prostate cancer: Proof of principle simulation study. <i>Medical Physics</i> , 2021, 48, 114-124.	3.0	3

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91	Intrafraction motion monitoring to determine PTV margins in early stage breast cancer patients receiving neoadjuvant partial breast SABR. <i>Radiotherapy and Oncology</i> , 2021, 158, 276-284.	0.6	3
92	First experimental evaluation of multi-target multileaf collimator tracking during volumetric modulated arc therapy for locally advanced prostate cancer. <i>Radiotherapy and Oncology</i> , 2021, 160, 212-220.	0.6	3
93	Uniform versus non-uniform dose prescription for proton stereotactic body radiotherapy of liver tumors investigated by extensive motion-including treatment simulations. <i>Physics in Medicine and Biology</i> , 2021, 66, 205009.	3.0	3
94	Technical Note: In silico and experimental evaluation of two leaf-fitting algorithms for MLC tracking based on exposure error and plan complexity. <i>Medical Physics</i> , 2019, 46, 1814-1820.	3.0	2
95	Six degrees of freedom dynamic motion-including dose reconstruction in a commercial treatment planning system. <i>Medical Physics</i> , 2021, 48, 1427-1435.	3.0	2
96	Visible photoluminescence from the nanophase film prepared by Ge-Al co-evaporation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 241, 115-118.	2.1	1
97	Comparative study of the structural properties of nanocrystalline Ge:H plasma deposited onto the cathode and the anode using high hydrogen dilutions. <i>Thin Solid Films</i> , 1999, 346, 91-95.	1.8	1
98	A real-time IGRT method using a Kalman filter framework to extract 3D positions from 2D projections. <i>Physics in Medicine and Biology</i> , 2021, 66, 214001.	3.0	1
99	TU-G-141-09: Real Time Estimation of Prostate Tumor Rotation and Translation with a KV Imaging System Based On An Iterative Closest Point Algorithm. <i>Medical Physics</i> , 2013, 40, 458-458.	3.0	1
100	TU-E-141-07: Real Time 3D Target Position Estimation Using a Single KV Imager Combined with an External Respiratory Monitor during Arc and Static Beam Delivery. <i>Medical Physics</i> , 2010, 37, 3402-3403.	3.0	0
101	MO-F-BRC-01: 3D Target Trajectory Reconstruction Using CBCT Projection Images. <i>Medical Physics</i> , 2011, 38, 3723-3723.	3.0	0
102	TU-E-141-04: Dose Reconstruction for DMLC Tracking and Gating in Adaptive Prostate Radiotherapy. <i>Medical Physics</i> , 2013, 40, 447-447.	3.0	0