

Amit Sawant

List of Publications by Year in descending order

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Version: 2024-02-01

83
papers

2,046
citations

201674

27
h-index

254184

43
g-index

83
all docs

83
docs citations

83
times ranked

1552
citing authors

#	ARTICLE	IF	CITATIONS
1	Management of three-dimensional intrafraction motion through real-time DMLC tracking. <i>Medical Physics</i> , 2008, 35, 2050-2061.	3.0	153
2	First Demonstration of Combined kV/MV Image-Guided Real-Time Dynamic Multileaf-Collimator Target Tracking. <i>International Journal of Radiation Oncology Biology Physics</i> , 2009, 74, 859-867.	0.8	114
3	Toward Submillimeter Accuracy in the Management of Intrafraction Motion: The Integration of Real-Time Internal Position Monitoring and Multileaf Collimator Target Tracking. <i>International Journal of Radiation Oncology Biology Physics</i> , 2009, 74, 575-582.	0.8	100
4	Development and preliminary evaluation of a prototype audiovisual biofeedback device incorporating a patient-specific guiding waveform. <i>Physics in Medicine and Biology</i> , 2008, 53, N197-N208.	3.0	75
5	Failure mode and effect analysis-based quality assurance for dynamic MLC tracking systems. <i>Medical Physics</i> , 2010, 37, 6466-6479.	3.0	64
6	Dynamic Multileaf Collimator Tracking of Respiratory Target Motion Based on a Single Kilovoltage Imager During Arc Radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2010, 77, 600-607.	0.8	63
7	4998-5005.	3.0	63
8	Real-time dynamic MLC tracking for inversely optimized arc radiotherapy. <i>Radiotherapy and Oncology</i> , 2010, 94, 218-223.	0.6	62
9	A Dose of Reality: How 20 Years of Incomplete Physics and Dosimetry Reporting in Radiobiology Studies May Have Contributed to the Reproducibility Crisis. <i>International Journal of Radiation Oncology Biology Physics</i> , 2020, 106, 243-252.	0.8	61
10	Electromagnetic-Guided Dynamic Multileaf Collimator Tracking Enables Motion Management for Intensity-Modulated Arc Therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011, 79, 312-320.	0.8	60
11	Segmented crystalline scintillators: An initial investigation of high quantum efficiency detectors for megavoltage x-ray imaging. <i>Medical Physics</i> , 2005, 32, 3067-3083.	3.0	59
12	Implementation of a New Method for Dynamic Multileaf Collimator Tracking of Prostate Motion in Arc Radiotherapy Using a Single kV Imager. <i>International Journal of Radiation Oncology Biology Physics</i> , 2010, 76, 914-923.	0.8	59
13	Dynamic MLC tracking of moving targets with a single kV imager for 3D conformal and IMRT treatments. <i>Acta Oncologica</i> , 2010, 49, 1092-1100.	1.8	50
14	AAPM Task Group 264: The safe clinical implementation of MLC tracking in radiotherapy. <i>Medical Physics</i> , 2021, 48, e44-e64.	3.0	49
15	DMLC motion tracking of moving targets for intensity modulated arc therapy treatment – a feasibility study. <i>Acta Oncologica</i> , 2009, 48, 245-250.	1.8	48
16	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
17	Electromagnetic Detection and Real-Time DMLC Adaptation to Target Rotation During Radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 82, e545-e553.	0.8	42
18	Use of PET and Other Functional Imaging to Guide Target Delineation in Radiation Oncology. <i>Seminars in Radiation Oncology</i> , 2018, 28, 171-177.	2.2	42

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19	Systematic investigation of the signal properties of polycrystalline HgI ₂ detectors under mammographic, radiographic, fluoroscopic and radiotherapy irradiation conditions. <i>Physics in Medicine and Biology</i> , 2005, 50, 2907-2928.	3.0	41
20	Effects of x-ray irradiation on polycrystalline silicon, thin-film transistors. <i>Journal of Applied Physics</i> , 2006, 99, 064501.	2.5	41
21	Investigating the Feasibility of Rapid MRI for Image-Guided Motion Management in Lung Cancer Radiotherapy. <i>BioMed Research International</i> , 2014, 2014, 1-6.	1.9	41
22	Segmented crystalline scintillators: Empirical and theoretical investigation of a high quantum efficiency EPID based on an initial engineering prototype CsI(Tl) detector. <i>Medical Physics</i> , 2006, 33, 1053-1066.	3.0	39
23	Integration of Real-Time Internal Electromagnetic Position Monitoring Coupled With Dynamic Multileaf Collimator Tracking: An Intensity-Modulated Radiation Therapy Feasibility Study. <i>International Journal of Radiation Oncology Biology Physics</i> , 2009, 74, 868-875.	0.8	39
24	Performance of a high fill factor, indirect detection prototype flat-panel imager for mammography. <i>Medical Physics</i> , 2006, 34, 315-327.	3.0	38
25	Four-dimensional IMRT treatment planning using a DMLC motion-tracking algorithm. <i>Physics in Medicine and Biology</i> , 2009, 54, 3821-3835.	3.0	37
26	Segmented phosphors: MEMS-based high quantum efficiency detectors for megavoltage x-ray imaging. <i>Medical Physics</i> , 2005, 32, 553-565.	3.0	36
27	Examination of PbI ₂ and HgI ₂ photoconductive materials for direct detection, active matrix, flat-panel imagers for diagnostic X-ray imaging. <i>IEEE Transactions on Nuclear Science</i> , 2005, 52, 38-45.	2.0	36
28	Monte Carlo investigations of megavoltage cone-beam CT using thick, segmented scintillating detectors for soft tissue visualization. <i>Medical Physics</i> , 2008, 35, 145-158.	3.0	25
29	Performance evaluation of polycrystalline photoconductors for radiation therapy imaging. <i>Medical Physics</i> , 2010, 37, 2738-2748.	3.0	25
30	An externally and internally deformable, programmable lung motion phantom. <i>Medical Physics</i> , 2015, 42, 2585-2593.	3.0	25
31	Theoretical analysis and experimental evaluation of a CsI(Tl) based electronic portal imaging system. <i>Medical Physics</i> , 2002, 29, 1042-1053.	3.0	23
32	Cavernous Nerve Injury by Radiation Therapy May Potentiate Erectile Dysfunction in Rats. <i>International Journal of Radiation Oncology Biology Physics</i> , 2017, 99, 680-688.	0.8	22
33	Toward More Precise Radiotherapy Treatment of Lung Tumors. <i>Computer</i> , 2012, 45, 59-65.	1.1	21
34	Megavoltage Image-Based Dynamic Multileaf Collimator Tracking of a NiTi Stent in Porcine Lungs on a Linear Accelerator. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 82, e321-e327.	0.8	20
35	Slit design for efficient and accurate MTF measurement at megavoltage x-ray energies. <i>Medical Physics</i> , 2007, 34, 1535-1545.	3.0	16
36	Experimental investigation of a general real-time 3D target localization method using sequential kV imaging combined with respiratory monitoring. <i>Physics in Medicine and Biology</i> , 2012, 57, 7395-7407.	3.0	16

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37	Real-Time 2D-3D Deformable Registration with Deep Learning and Application to Lung Radiotherapy Targeting. Lecture Notes in Computer Science, 2019, , 265-276.	1.3	16
38	Dose warping performance in deformable image registration in lung. Physica Medica, 2017, 37, 16-23.	0.7	14
39	Radiotherapy Planning Using an Improved Search Strategy in Particle Swarm Optimization. IEEE Transactions on Biomedical Engineering, 2017, 64, 980-989.	4.2	14
40	Experimental investigation of a moving averaging algorithm for motion perpendicular to the leaf travel direction in dynamic MLC target tracking. Medical Physics, 2011, 38, 3924-3931.	3.0	13
41	Fabrication of high aspect-ratio polymer microstructures for large-area electronic portal X-ray imagers. Sensors and Actuators A: Physical, 2007, 140, 185-193.	4.1	12
42	Virtual Bronchoscopy-Guided Treatment Planning to Map and Mitigate Radiation-Induced Airway Injury in Lung SABR. International Journal of Radiation Oncology Biology Physics, 2018, 102, 210-218.	0.8	12
43	Radiation shielding and safety implications following linac conversion to an electron FLASH-RT unit. Medical Physics, 2021, 48, 5396-5405.	3.0	12
44	Inversed-Planned Respiratory Phase Gating in Lung Conformal Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 99, 317-324.	0.8	11
45	Mild hyperthermia as a localized radiosensitizer for deep-seated tumors: investigation in an orthotopic prostate cancer model in mice. British Journal of Radiology, 2019, 92, 20180759.	2.2	11
46	Technical note: Characterization and practical applications of a novel plastic scintillator for online dosimetry for an ultrahigh dose rate (FLASH). Medical Physics, 2022, 49, 4682-4692.	3.0	11
47	A continuous surface reconstruction method on point cloud captured from a 3D surface photogrammetry system. Medical Physics, 2015, 42, 6564-6571.	3.0	10
48	Development and implementation of EPID -based quality assurance tests for the small animal radiation research platform (SARRP). Medical Physics, 2018, 45, 3246-3257.	3.0	10
49	Kilovoltage transit and exit dosimetry for a small animal image-guided radiotherapy system using built-in EPID. Medical Physics, 2018, 45, 4642-4651.	3.0	10
50	Improved swarm intelligence solution in large scale radiation therapy inverse planning. , 2015, , .		8
51	Biological optimization for mediastinal lymphoma radiotherapy - a preliminary study. Acta Oncologica, 2020, 59, 879-887.	1.8	8
52	Online dose delivery verification in small animal image-guided radiotherapy. Medical Physics, 2020, 47, 1871-1879.	3.0	8
53	Investigation of strategies to achieve optimal DQE performance from indirect-detection active-matrix flat-panel imagers (AMFPIs) through novel pixel amplification architectures (Invited Paper). , 2005, , .		7
54	Fast leaf-fitting with generalized underdose/overdose constraints for real-time MLC tracking. Medical Physics, 2015, 43, 465-474.	3.0	7

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55	A novel deformable lung phantom with programably variable external and internal correlation. Medical Physics, 2019, 46, 1995-2005.	3.0	7
56	Tumor-tracking radiotherapy of moving targets; verification using 3D polymer gel, 2D ion-chamber array and biplanar diode array. Journal of Physics: Conference Series, 2010, 250, 012051.	0.4	6
57	Four-dimensional planning for motion synchronized dose delivery in lung stereotactic body radiation therapy. Radiotherapy and Oncology, 2016, 119, 467-472.	0.6	6
58	Multi-GPU configuration of 4D intensity modulated radiation therapy inverse planning using global optimization. Physics in Medicine and Biology, 2018, 63, 025028.	3.0	6
59	Individualized estimates of overall survival in radiation therapy plan optimization "A concept study. Medical Physics, 2018, 45, 5332-5342.	3.0	6
60	RhoA/ROCK pathway inhibitor ameliorates erectile dysfunction induced by radiation therapy in rats. Radiotherapy and Oncology, 2020, 150, 174-180.	0.6	6
61	An MRI-compatible platform for one-dimensional motion management studies in MRI. Magnetic Resonance in Medicine, 2016, 76, 702-712.	3.0	5
62	A comprehensive geometric quality assurance framework for preclinical microirradiators. Medical Physics, 2019, 46, 1840-1851.	3.0	5
63	Prediction of high-dimensional states subject to respiratory motion: a manifold learning approach. Physics in Medicine and Biology, 2016, 61, 4989-4999.	3.0	4
64	Prognostic factors associated with the accuracy of deformable image registration in lung cancer patients treated with stereotactic body radiotherapy. Medical Dosimetry, 2017, 42, 326-333.	0.9	4
65	Treatment planning based on lung functional avoidance is not ready for clinical deployment. Medical Physics, 2018, 45, 2353-2356.	3.0	4
66	Inverse radiotherapy planning based on bioeffect modelling for locally advanced left-sided breast cancer. Radiotherapy and Oncology, 2019, 136, 9-14.	0.6	4
67	Three discipline collaborative radiation therapy (3 DCRT) special debate: I would treat all early-stage NSCLC patients with SBRT. Journal of Applied Clinical Medical Physics, 2019, 20, 7-13.	1.9	4
68	A failure modes and effects analysis quality management framework for image-guided small animal irradiators: A change in paradigm for radiation biology. Medical Physics, 2020, 47, 2013-2022.	3.0	4
69	Exploring Baseline Shift Prediction in Respiration Induced Tumor Motion. , 2014, , .		3
70	Characterizing spatiotemporal information loss in sparse-sampling-based dynamic MRI for monitoring respiration-induced tumor motion in radiotherapy. Medical Physics, 2016, 43, 2807-2820.	3.0	3
71	A robust real-time surface reconstruction method on point clouds captured from a 3D surface photogrammetry system. Medical Physics, 2016, 43, 2353-2360.	3.0	3
72	Accounting for respiratory motion in small serial structures during radiotherapy planning: proof of concept in virtual bronchoscopy-guided lung functional avoidance radiotherapy. Physics in Medicine and Biology, 2019, 64, 225011.	3.0	3

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73	Proton therapy for thoracic malignancies: a review of oncologic outcomes. Expert Review of Anticancer Therapy, 2021, 21, 177-191.	2.4	3
74	Combining Serial and Parallel Functionality in Functional Lung Avoidance Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2022, 113, 456-468.	0.8	3
75	Dysregulated Epigenetics of Chordoma: Prognostic Markers and Therapeutic Targets. Current Cancer Drug Targets, 2022, 22, 678-690.	1.6	3
76	Mining pattern sequences in respiratory tumor motion data. , 2012, 2012, 5262-5.		2
77	Inverse-planned deliverable 4D-IMRT for lung SBRT. Medical Physics, 2018, 45, 5145-5160.	3.0	2
78	Technical Note: In silico and experimental evaluation of two leaf-fitting algorithms for MLC tracking based on exposure error and plan complexity. Medical Physics, 2019, 46, 1814-1820.	3.0	2
79	Diffeomorphic Density Registration in Thoracic Computed Tomography. Lecture Notes in Computer Science, 2016, , 46-53.	1.3	2
80	Theoretical investigation of very high quantum efficiency, segmented, crystalline detectors for low-contrast visualization in megavoltage cone-beam CT. , 2006, , .		1
81	Calculating Patient Similarity Based on Respiration Induced Tumor Motion. , 2015, , .		1
82	Proton stereotactic body radiation therapy for non-small cell lung cancer. Annals of Translational Medicine, 2020, 8, 1198-1198.	1.7	1
83	Abstract PO-126: Loss of HIF1A decreases resistance to radiation and invasiveness in pancreatic ductal adenocarcinoma. , 2021, , .		0