Amit Sawant

List of Publications by Year
in descending order

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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	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
2	Dysregulated Epigenetics of Chordoma: Prognostic Markers and Therapeutic Targets. Current Cancer Drug Targets, 2022, 22, 678-690.	1.6	3
3	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
4	AAPM Task Group 264: The safe clinical implementation of MLC tracking in radiotherapy. Medical Physics, 2021, 48, e44-e64.	3.0	49
5	Proton therapy for thoracic malignancies: a review of oncologic outcomes. Expert Review of Anticancer Therapy, 2021, 21, 177-191.	2.4	3
6	Radiation shielding and safety implications following linac conversion to an electron FLASHâ€RT unit. Medical Physics, 2021, 48, 5396-5405.	3.0	12
7	Abstract PO-126: Loss of HIF1A decreases resistance to radiation and invasiveness in pancreatic ductal adenocarcinoma. , 2021, , .		0
8	A Dose of Reality: How 20 Years of Incomplete Physics and Dosimetry Reporting in Radiobiology Studies May Have Contributed to the Reproducibility Crisis. International Journal of Radiation Oncology Biology Physics, 2020, 106, 243-252.	0.8	61
9	Proton stereotactic body radiation therapy for non-small cell lung cancer. Annals of Translational Medicine, 2020, 8, 1198-1198.	1.7	1
10	Biological optimization for mediastinal lymphoma radiotherapy â€“ a preliminary study. Acta OncolÃ³gica, 2020, 59, 879-887.	1.8	8
11	A failure modes and effects analysis quality management framework for imageâ€guided small animal irradiators: A change in paradigm for radiation biology. Medical Physics, 2020, 47, 2013-2022.	3.0	4
12	RhoA/ROCK pathway inhibitor ameliorates erectile dysfunction induced by radiation therapy in rats. Radiotherapy and Oncology, 2020, 150, 174-180.	0.6	6
13	Online dose delivery verification in small animal imageâ€guided radiotherapy. Medical Physics, 2020, 47, 1871-1879.	3.0	8
14	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
15	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
16	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
17	Inverse radiotherapy planning based on bioeffect modelling for locally advanced left-sided breast cancer. Radiotherapy and Oncology, 2019, 136, 9-14.	0.6	4
18	Three discipline collaborative radiation therapy (3 DCRT) special debate: I would treat all earlyâ€stage NSCLC patients with SBRT. Journal of Applied Clinical Medical Physics, 2019, 20, 7-13.	1.9	4

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19	A novel deformable lung phantom with programably variable external and internal correlation. Medical Physics, 2019, 46, 1995-2005.	3.0	7
20	A comprehensive geometric quality assurance framework for preclinical microirradiators. Medical Physics, 2019, 46, 1840-1851.	3.0	5
21	Technical Note: In silico and experimental evaluation of two leafâ€fitting algorithms for MLC tracking based on exposure error and plan complexity. Medical Physics, 2019, 46, 1814-1820.	3.0	2
22	Treatment planning based on lung functional avoidance is not ready for clinical deployment. Medical Physics, 2018, 45, 2353-2356.	3.0	4
23	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
24	Individualized estimates of overall survival in radiation therapy plan optimization â€" A concept study. Medical Physics, 2018, 45, 5332-5342.	3.0	6
25	Use of PET and Other Functional Imaging to Guide Target Delineation in Radiation Oncology. Seminars in Radiation Oncology, 2018, 28, 171-177.	2.2	42
26	Inverseâ€planned deliverable 4Dâ€IMRT for lung SBRT. Medical Physics, 2018, 45, 5145-5160.	3.0	2
27	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
28	Development and implementation of EPID â€based quality assurance tests for the small animal radiation research platform (SARRP). Medical Physics, 2018, 45, 3246-3257.	3.0	10
29	Kilovoltage transit and exit dosimetry for a small animal imageâ€guided radiotherapy system using builtâ€in <scp>EPID</scp>. Medical Physics, 2018, 45, 4642-4651.	3.0	10
30	Dose warping performance in deformable image registration in lung. Physica Medica, 2017, 37, 16-23.	0.7	14
31	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
32	Inversed-Planned Respiratory Phase Gating inÂLung Conformal Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 99, 317-324.	0.8	11
33	Cavernous Nerve Injury by Radiation Therapy May Potentiate Erectile Dysfunction in Rats. International Journal of Radiation Oncology Biology Physics, 2017, 99, 680-688.	0.8	22
34	Radiotherapy Planning Using an Improved Search Strategy in Particle Swarm Optimization. IEEE Transactions on Biomedical Engineering, 2017, 64, 980-989.	4.2	14
35	Characterizing spatiotemporal information loss in sparseâ€samplingâ€based dynamic MRI for monitoring respirationâ€induced tumor motion in radiotherapy. Medical Physics, 2016, 43, 2807-2820.	3.0	3
36	An MRI-compatible platform for one-dimensional motion management studies in MRI. Magnetic Resonance in Medicine, 2016, 76, 702-712.	3.0	5

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37	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
38	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
39	Four-dimensional planning for motion synchronized dose delivery in lung stereotactic body radiation therapy. Radiotherapy and Oncology, 2016, 119, 467-472.	0.6	6
40	Diffeomorphic Density Registration in Thoracic Computed Tomography. Lecture Notes in Computer Science, 2016, , 46-53.	1.3	2
41	An externally and internally deformable, programmable lung motion phantom. Medical Physics, 2015, 42, 2585-2593.	3.0	25
42	A continuous surface reconstruction method on point cloud captured from a 3D surface photogrammetry system. Medical Physics, 2015, 42, 6564-6571.	3.0	10
43	Fast leaf-fitting with generalized underdose/overdose constraints for real-time MLC tracking. Medical Physics, 2015, 43, 465-474.	3.0	7
44	Calculating Patient Similarity Based on Respiration Induced Tumor Motion. , 2015, , .		1
45	Improved swarm intelligence solution in large scale radiation therapy inverse planning. , 2015, , .		8
46	Investigating the Feasibility of Rapid MRI for Image-Guided Motion Management in Lung Cancer Radiotherapy. BioMed Research International, 2014, 2014, 1-6.	1.9	41
47	Exploring Baseline Shift Prediction in Respiration Induced Tumor Motion. , 2014, , .		3
48	Mining pattern sequences in respiratory tumor motion data. , 2012, 2012, 5262-5.		2
49	Experimental investigation of a general real-time 3D target localization method using sequential kV imaging combined with respiratory monitoring. Physics in Medicine and Biology, 2012, 57, 7395-7407.	3.0	16
50	Megavoltage Image-Based Dynamic Multileaf Collimator Tracking of a NiTi Stent in Porcine Lungs on a Linear Accelerator. International Journal of Radiation Oncology Biology Physics, 2012, 82, e321-e327.	0.8	20
51	Electromagnetic Detection and Real-Time DMLC Adaptation to Target Rotation During Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2012, 82, e545-e553.	0.8	42
52	Toward More Precise Radiotherapy Treatment of Lung Tumors. Computer, 2012, 45, 59-65.	1.1	21
53	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
54	Real-Time Target Position Estimation Using Stereoscopic Kilovoltage/Megavoltage Imaging and External Respiratory Monitoring for Dynamic Multileaf Collimator Tracking. International Journal of Radiation Oncology Biology Physics, 2011, 79, 269-278.	0.8	44

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55	Electromagnetic-Guided Dynamic Multileaf Collimator Tracking Enables Motion Management for Intensity-Modulated Arc Therapy. International Journal of Radiation Oncology Biology Physics, 2011, 79, 312-320.	0.8	60
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	Performance evaluation of polycrystalline photoconductors for radiation therapy imaging. Medical Physics, 2010, 37, 2738-2748.	3.0	25
58	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
59	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
60	Failure mode and effect analysisâ€based quality assurance for dynamic MLC tracking systems. Medical Physics, 2010, 37, 6466-6479.	3.0	64
61	4998-5005.	3.0	63
62	Dynamic MLC tracking of moving targets with a single kV imager for 3D conformal and IMRT treatments. Acta OncolÃ³gica, 2010, 49, 1092-1100.	1.8	50
63	Real-time dynamic MLC tracking for inversely optimized arc radiotherapy. Radiotherapy and Oncology, 2010, 94, 218-223.	0.6	62
64	Four-dimensional IMRT treatment planning using a DMLC motion-tracking algorithm. Physics in Medicine and Biology, 2009, 54, 3821-3835.	3.0	37
65	DMLC motion tracking of moving targets for intensity modulated arc therapy treatment â€“ a feasibility study. Acta OncolÃ³gica, 2009, 48, 245-250.	1.8	48
66	Toward Submillimeter Accuracy in the Management of Intrafraction Motion: The Integration of Real-Time Internal Position Monitoring and Multileaf Collimator Target Tracking. International Journal of Radiation Oncology Biology Physics, 2009, 74, 575-582.	0.8	100
67	First Demonstration of Combined kV/MV Image-Guided Real-Time Dynamic Multileaf-Collimator Target Tracking. International Journal of Radiation Oncology Biology Physics, 2009, 74, 859-867.	0.8	114
68	Integration of Real-Time Internal Electromagnetic Position Monitoring Coupled With Dynamic Multileaf Collimator Tracking: An Intensity-Modulated Radiation Therapy Feasibility Study. International Journal of Radiation Oncology Biology Physics, 2009, 74, 868-875.	0.8	39
69	Monte Carlo investigations of megavoltage coneâ€beam CT using thick, segmented scintillating detectors for soft tissue visualization. Medical Physics, 2008, 35, 145-158.	3.0	25
70	Management of threeâ€dimensional intrafraction motion through realâ€time DMLC tracking. Medical Physics, 2008, 35, 2050-2061.	3.0	153
71	Development and preliminary evaluation of a prototype audiovisual biofeedback device incorporating a patient-specific guiding waveform. Physics in Medicine and Biology, 2008, 53, N197-N208.	3.0	75
72	Slit design for efficient and accurate MTF measurement at megavoltage x-ray energies. Medical Physics, 2007, 34, 1535-1545.	3.0	16

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73	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
74	Performance of a high fill factor, indirect detection prototype flat-panel imager for mammography. Medical Physics, 2006, 34, 315-327.	3.0	38
75	Segmented crystalline scintillators: Empirical and theoretical investigation of a high quantum efficiency EPID based on an initial engineering prototype CsI(Tl) detector. Medical Physics, 2006, 33, 1053-1066.	3.0	39
76	Theoretical investigation of very high quantum efficiency, segmented, crystalline detectors for low-contrast visualization in megavoltage cone-beam CT. , 2006, , .		1
77	Effects of x-ray irradiation on polycrystalline silicon, thin-film transistors. Journal of Applied Physics, 2006, 99, 064501.	2.5	41
78	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
79	Systematic investigation of the signal properties of polycrystalline HgI2detectors under mammographic, radiographic, fluoroscopic and radiotherapy irradiation conditions. Physics in Medicine and Biology, 2005, 50, 2907-2928.	3.0	41
80	Segmented phosphors: MEMS-based high quantum efficiency detectors for megavoltage x-ray imaging. Medical Physics, 2005, 32, 553-565.	3.0	36
81	Segmented crystalline scintillators: An initial investigation of high quantum efficiency detectors for megavoltage x-ray imaging. Medical Physics, 2005, 32, 3067-3083.	3.0	59
82	Examination of PbI/sub 2/ and HgI/sub 2/ photoconductive materials for direct detection, active matrix, flat-panel imagers for diagnostic X-ray imaging. IEEE Transactions on Nuclear Science, 2005, 52, 38-45.	2.0	36
83	Theoretical analysis and experimental evaluation of a CsI(Tl) based electronic portal imaging system. Medical Physics, 2002, 29, 1042-1053.	3.0	23