

# Jin Sung Kim

## List of Publications by Year in descending order

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117  
papers

1,115  
citations

471509

17  
h-index

526287

27  
g-index

122  
all docs

122  
docs citations

122  
times ranked

1173  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fast compressed sensing-based CBCT reconstruction using Barzilai-Borwein formulation for application to on-line IGRT. <i>Medical Physics</i> , 2012, 39, 1207-1217.	3.0	125
2	New Technique for Developing a Proton Range Compensator With Use of a 3-Dimensional Printer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014, 88, 453-458.	0.8	55
3	Clinical evaluation of atlas- and deep learning-based automatic segmentation of multiple organs and clinical target volumes for breast cancer. <i>Radiotherapy and Oncology</i> , 2020, 153, 139-145.	0.6	53
4	The first private-hospital based proton therapy center in Korea; status of the Proton Therapy Center at Samsung Medical Center. <i>Radiation Oncology Journal</i> , 2015, 33, 337.	1.5	40
5	Synthetic CT reconstruction using a deep spatial pyramid convolutional framework for MR-only breast radiotherapy. <i>Medical Physics</i> , 2019, 46, 4135-4147.	3.0	37
6	Four-dimensional cone-beam computed tomography and digital tomosynthesis reconstructions using respiratory signals extracted from transcutaneously inserted metal markers for liver SBRT. <i>Medical Physics</i> , 2011, 38, 1028-1036.	3.0	36
7	Clinical Evaluation of Commercial Atlas-Based Auto-Segmentation in the Head and Neck Region. <i>Frontiers in Oncology</i> , 2019, 9, 239.	2.8	36
8	MRI super-resolution reconstruction for MRI-guided adaptive radiotherapy using cascaded deep learning: In the presence of limited training data and unknown translation model. <i>Medical Physics</i> , 2019, 46, 4148-4164.	3.0	34
9	Clinical feasibility of deep learning-based auto-segmentation of target volumes and organs-at-risk in breast cancer patients after breast-conserving surgery. <i>Radiation Oncology</i> , 2021, 16, 44.	2.7	33
10	Optimization of treatment planning workflow and tumor coverage during daily adaptive magnetic resonance image guided radiation therapy (MR-IGRT) of pancreatic cancer. <i>Radiation Oncology</i> , 2018, 13, 51.	2.7	30
11	Atlas-based auto-segmentation for postoperative radiotherapy planning in endometrial and cervical cancers. <i>Radiation Oncology</i> , 2020, 15, 106.	2.7	26
12	Lymphocyte dynamics during and after chemo-radiation correlate to dose and outcome in stage III NSCLC patients undergoing maintenance immunotherapy. <i>Radiotherapy and Oncology</i> , 2022, 168, 1-7.	0.6	25
13	Ultra-Fast Digital Tomosynthesis Reconstruction Using General-Purpose GPU Programming for Image-Guided Radiation Therapy. <i>Technology in Cancer Research and Treatment</i> , 2011, 10, 295-306.	1.9	24
14	Physical and Biological Characteristics of Particle Therapy for Oncologists. <i>Cancer Research and Treatment</i> , 2021, 53, 611-620.	3.0	21
15	Feasibility of Continual Deep Learning-Based Segmentation for Personalized Adaptive Radiation Therapy in Head and Neck Area. <i>Cancers</i> , 2021, 13, 702.	3.7	20
16	Evaluation of deep learning-based autosegmentation in breast cancer radiotherapy. <i>Radiation Oncology</i> , 2021, 16, 203.	2.7	20
17	Motion-map constrained image reconstruction (MCIR): Application to four-dimensional cone-beam computed tomography. <i>Medical Physics</i> , 2013, 40, 121710.	3.0	19
18	Evaluation of radiation dose to organs during kilovoltage cone-beam computed tomography using Monte Carlo simulation. <i>Journal of Applied Clinical Medical Physics</i> , 2014, 15, 295-302.	1.9	19

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19	Effect of Radiation Therapy Techniques on Outcome in N3-positive IIIB Non-small Cell Lung Cancer Treated with Concurrent Chemoradiotherapy. <i>Cancer Research and Treatment</i> , 2016, 48, 106-114.	3.0	19
20	Detailed evaluation of Mobius3D dose calculation accuracy for volumetric-modulated arc therapy. <i>Physica Medica</i> , 2020, 74, 125-132.	0.7	17
21	Risk of Hypothyroidism in Women After Radiation Therapy for Breast Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021, 110, 462-472.	0.8	17
22	Secondary cancer incidence risk estimates for external radiotherapy and high-dose-rate brachytherapy in cervical cancer: phantom study. <i>Journal of Applied Clinical Medical Physics</i> , 2016, 17, 124-132.	1.9	16
23	Intentional deep overfit learning (IDOL): A novel deep learning strategy for adaptive radiation therapy. <i>Medical Physics</i> , 2022, 49, 488-496.	3.0	16
24	The proton therapy nozzles at Samsung Medical Center: A Monte Carlo simulation study using TOPAS. <i>Journal of the Korean Physical Society</i> , 2015, 67, 170-174.	0.7	13
25	Clinical outcomes of multileaf collimator-based CyberKnife for spine stereotactic body radiation therapy. <i>British Journal of Radiology</i> , 2017, 90, 20170523.	2.2	13
26	Medical student education through flipped learning and virtual rotations in radiation oncology during the COVID-19 pandemic: a cross sectional research. <i>Radiation Oncology</i> , 2021, 16, 204.	2.7	13
27	Combining deep-inspiration breath hold and intensity-modulated radiotherapy for gastric mucosa-associated lymphoid tissue lymphoma: Dosimetric evaluation using comprehensive plan quality indices. <i>Radiation Oncology</i> , 2019, 14, 59.	2.7	12
28	Four Dimensional Digital Tomosynthesis Using on-Board Imager for the Verification of Respiratory Motion. <i>PLoS ONE</i> , 2014, 9, e115795.	2.5	11
29	IMAGING DOSE OF HUMAN ORGANS FROM kV-CBCT IN IMAGE-GUIDED RADIATION THERAPY. <i>Radiation Protection Dosimetry</i> , 2017, 175, 194-200.	0.8	11
30	Flexible film dosimeter for in vivo dosimetry. <i>Medical Physics</i> , 2020, 47, 3204-3213.	3.0	11
31	Evaluation of quality of life using a tablet PC-based survey in cancer patients treated with radiotherapy: a multi-institutional prospective randomized crossover comparison of paper and tablet PC-based questionnaires (KROG 12-01). <i>Supportive Care in Cancer</i> , 2016, 24, 4399-4406.	2.2	10
32	A Retrospective Dosimetric Analysis of the New ESTRO-ACROP Target Volume Delineation Guidelines for Postmastectomy Volumetric Modulated Arc Therapy After Implant-Based Immediate Breast Reconstruction. <i>Frontiers in Oncology</i> , 2020, 10, 578921.	2.8	10
33	Dosimetric Comparison of Radiation Techniques for Comprehensive Regional Nodal Radiation Therapy for Left-Sided Breast Cancer: A Treatment Planning Study. <i>Frontiers in Oncology</i> , 2021, 11, 645328.	2.8	10
34	Abdominal synthetic CT reconstruction with intensity projection prior for MRI-only adaptive radiotherapy. <i>Physics in Medicine and Biology</i> , 2021, 66, 204001.	3.0	10
35	Carotid-Sparing TomoHelical 3-Dimensional Conformal Radiotherapy for Early Glottic Cancer. <i>Cancer Research and Treatment</i> , 2016, 48, 63-70.	3.0	10
36	An efficient iterative CBCT reconstruction approach using gradient projection sparse reconstruction algorithm. <i>Oncotarget</i> , 2016, 7, 87342-87350.	1.8	9

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37	Analysis of changes in dose distribution due to respiration during IMRT. Radiation Oncology Journal, 2011, 29, 206.	1.5	9
38	Deep-Learning-Based Automatic Detection and Segmentation of Brain Metastases with Small Volume for Stereotactic Ablative Radiotherapy. Cancers, 2022, 14, 2555.	3.7	9
39	Three-dimensional radiochromic film dosimetry of proton clinical beams using a gafchromic EBT2 film array. Radiation Protection Dosimetry, 2012, 151, 272-277.	0.8	8
40	Development of a video-guided real-time patient motion monitoring system. Medical Physics, 2012, 39, 2396-2404.	3.0	7
41	Optimal dose reduction algorithm using an attenuation-based tube current modulation method for cone-beam CT imaging. PLoS ONE, 2018, 13, e0192933.	2.5	7
42	Feasibility of hybrid TomoHelical- and TomoDirect-based volumetric gradient matching technique for total body irradiation. Radiation Oncology, 2019, 14, 233.	2.7	7
43	TomoEQA: Dose verification for patient-specific quality assurance in helical tomotherapy using an exit detector. Physica Medica, 2021, 82, 1-6.	0.7	7
44	Deep-Learning-Based Automatic Segmentation of Head and Neck Organs for Radiation Therapy in Dogs. Frontiers in Veterinary Science, 2021, 8, 721612.	2.2	7
45	Monte Carlo simulation of secondary neutron dose for scanning proton therapy using FLUKA. PLoS ONE, 2017, 12, e0186544.	2.5	7
46	First clinical experience of correcting phantom-based image distortion related to gantry position on a 0.35T MR-Linac. Journal of Applied Clinical Medical Physics, 2021, 22, 21-28.	1.9	7
47	Current status of disposal and measurement analysis of radioactive components in linear accelerators in Korea. Nuclear Engineering and Technology, 2022, 54, 507-513.	2.3	7
48	Development of a 3D optical scanning-based automatic quality assurance system for proton range compensators. Medical Physics, 2015, 42, 1071-1079.	3.0	6
49	A virtual simulator designed for collision prevention in proton therapy. Medical Physics, 2015, 42, 6021-6027.	3.0	6
50	Trend Analysis on Korean and International Management for Activated Material Waste from Medical Linear Accelerator. Progress in Medical Physics, 2020, 31, 194-204.	0.3	6
51	Comparison of Intensity-modulated Radiation Therapy (IMRT), Uniform Scanning Proton Therapy (USPT), and Intensity-modulated Proton Therapy (IMPT) for Prostate Cancer: A Treatment Planning Study. Progress in Medical Physics, 2013, 24, 154.	0.4	5
52	Commissioning and Validation of a Dedicated Scanning Nozzle at Samsung Proton Therapy Center. Progress in Medical Physics, 2016, 27, 267.	0.4	5
53	MEASUREMENT OF NEUTRON AMBIENT DOSE EQUIVALENT IN PROTON RADIOTHERAPY WITH LINE-SCANNING AND WOBBLING MODE TREATMENT SYSTEM. Radiation Protection Dosimetry, 2017, 177, 382-388.	0.8	5
54	Kilovoltage radiotherapy for companion animals: dosimetric comparison of 300 kV, 450 kV, and 6 MV X-ray beams. Journal of Veterinary Science, 2018, 19, 550.	1.3	5

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55	Generation of polychromatic projection for dedicated breast computed tomography simulation using anthropomorphic numerical phantom. PLoS ONE, 2017, 12, e0187242.	2.5	5
56	Variable step size methods for solving simultaneous algebraic reconstruction technique (SART)-type CBCT reconstructions. Oncotarget, 2017, 8, 33827-33835.	1.8	5
57	Synthetic contrast-enhanced computed tomography generation using a deep convolutional neural network for cardiac substructure delineation in breast cancer radiation therapy: a feasibility study. Radiation Oncology, 2022, 17, 83.	2.7	5
58	Patient-Specific Quality Assurance in a Multileaf Collimator-Based CyberKnife System Using the Planar Ion Chamber Array. Progress in Medical Physics, 2018, 29, 59.	0.3	4
59	Dosimetric Effects of Intrafractional Organ Motion in Field-in-Field Technique for Whole-Breast Irradiation. Progress in Medical Physics, 2019, 30, 65.	0.3	4
60	Commissioning and clinical implementation of Mobius3D and MobiusFX: Experience on multiple linear accelerators. Physica Medica, 2020, 80, 1-9.	0.7	4
61	Evaluation of super-resolution on 50 pancreatic cancer patients with real-time cine MRI from 0.35T MRgRT. Biomedical Physics and Engineering Express, 2021, 7, 055020.	1.2	4
62	Patterns of Locoregional Recurrence after Radical Cystectomy for Stage T3-4 Bladder Cancer: A Radiation Oncologist's Point of View. Yonsei Medical Journal, 2021, 62, 569.	2.2	4
63	History of the Photon Beam Dose Calculation Algorithm in Radiation Treatment Planning System. Progress in Medical Physics, 2020, 31, 54-62.	0.3	4
64	Assessment of a novel commercial large field of view phantom for comprehensive MR imaging quality assurance of a 0.35T MRgRT system. Journal of Applied Clinical Medical Physics, 2022, 23, e13535.	1.9	4
65	Feasibility study of the neutron dose for real-time image-guided proton therapy: A Monte Carlo study. Journal of the Korean Physical Society, 2015, 67, 142-146.	0.7	3
66	Half-Fan-Based Intensity-Weighted Region-of-Interest Imaging for Low-Dose Cone-Beam CT in Image-Guided Radiation Therapy. Healthcare Informatics Research, 2016, 22, 316.	1.9	3
67	Acceptance Testing and Commissioning of Robotic Intensity-Modulated Radiation Therapy M6 System Equipped with InCise, 2 Multileaf Collimator. Progress in Medical Physics, 2018, 29, 8.	0.3	3
68	Skin Dose Comparison of CyberKnife and Helical Tomotherapy for Head-and-Neck Stereotactic Body Radiotherapy. Progress in Medical Physics, 2019, 30, 1.	0.3	3
69	Development and application of chip calorimeter as an X-ray detector. Current Applied Physics, 2020, 20, 337-343.	2.4	3
70	Predictive value of interim 18F-FDG-PET in patients with non-small cell lung cancer treated with definitive radiation therapy. PLoS ONE, 2020, 15, e0236350.	2.5	3
71	Improvement in sensitivity of radiochromic 3D dosimeter based on rigid polyurethane resin by incorporating tartrazine. PLoS ONE, 2020, 15, e0230410.	2.5	3
72	Dosimetric Comparison of Four Commercial Patient-Specific Quality Assurance Devices for Helical Tomotherapy. Journal of the Korean Physical Society, 2020, 76, 257-263.	0.7	3

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73	Review of the Existing Relative Biological Effectiveness Models for Carbon Ion Beam Therapy. Progress in Medical Physics, 2020, 31, 1-7.	0.3	3
74	Deep Learning in Radiation Oncology. Progress in Medical Physics, 2020, 31, 111-123.	0.3	3
75	Simple calculation using anatomical features on pre-treatment verification CT for bladder volume estimation during radiation therapy for rectal cancer. BMC Cancer, 2020, 20, 942.	2.6	3
76	Assessment of log <sub>e</sub> -based fingerprinting system of Mobius3D with Elekta linear accelerators. Journal of Applied Clinical Medical Physics, 2022, 23, .	1.9	3
77	A pilot study of a novel method to visualize three-dimensional dose distribution on skin surface images to evaluate radiation dermatitis. Scientific Reports, 2022, 12, 2729.	3.3	3
78	Measurements of Neutron Activation and Dose Rate Induced by High-Energy Medical Linear Accelerator. Progress in Medical Physics, 2021, 32, 145-152.	0.3	3
79	Secondary Neutron Dose Measurement for Proton Line Scanning Therapy. Progress in Medical Physics, 2016, 27, 162.	0.4	2
80	Practical Implementation of Patient-Specific Quality Assurance for Small and Multiple Brain Tumors in CyberKnife with Fixed Collimators. Progress in Medical Physics, 2018, 29, 53.	0.3	2
81	Image quality of 4D in-treatment CBCT acquired during lung SBRT using FFF beam: a phantom study. Radiation Oncology, 2020, 15, 224.	2.7	2
82	Assessment of dosimetric leaf gap correction factor in Mobius3D commissioning affected by couch top. Physical and Engineering Sciences in Medicine, 2020, 43, 1069-1075.	2.4	2
83	Analysis of radiation safety management status of medical linear accelerator facilities in Korea. Nuclear Engineering and Technology, 2022, 54, 449-455.	2.3	2
84	Optimization of Proton CT Detector System and Image Reconstruction Algorithm for On-Line Proton Therapy. PLoS ONE, 2016, 11, e0156226.	2.5	2
85	An Empirical Approach to Dosimetric Effect of Carbon Fiber Couch for Flattening Filter Free Beam of Elekta LINAC. Progress in Medical Physics, 2016, 27, 220.	0.4	2
86	Development of a novel program for conversion from tetrahedral <sup>2</sup> -mesh <sup>2</sup> -based phantoms to DICOM dataset for radiation treatment planning: TET2DICOM. Journal of Applied Clinical Medical Physics, 2021, , .	1.9	2
87	Magnetic resonance image-based tomotherapy planning for prostate cancer. Radiation Oncology Journal, 2020, 38, 52-59.	1.5	2
88	Comparison of Dose Distribution in Spine Radiosurgery Plans: Simultaneously Integrated Boost and RTOG 0631 Protocol. Progress in Medical Physics, 2014, 25, 176.	0.4	1
89	Feasibility of using Geant4 Monte Carlo simulation for IMRT dose calculations for the Novalis Tx with a HD-120 multi-leaf collimator. Journal of the Korean Physical Society, 2015, 66, 1489-1494.	0.7	1
90	A Hybrid Approach to Reduce Cone-Beam Artifacts for a Circular Orbit Cone-Beam CT System. IEEE Access, 2018, 6, 54595-54606.	4.2	1

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91	Evaluation of the Dosimetric Accuracy of Brain Stereotactic Radiotherapy by Using a Hybrid Quality Assurance (QA) Toolkit. Journal of the Korean Physical Society, 2019, 74, 292-297.	0.7	1
92	Statistical Analysis of Treatment Planning Parameters for Prediction of Delivery Quality Assurance Failure for Helical Tomotherapy. Technology in Cancer Research and Treatment, 2020, 19, 153303382097969.	1.9	1
93	TomoMQA: Automated analysis program for MVCT quality assurance of helical tomotherapy. Journal of Applied Clinical Medical Physics, 2020, 21, 151-157.	1.9	1
94	Evaluation of Computer-Aided Nodule Assessment and Risk Yield (CANARY) in Korean patients for prediction of invasiveness of ground-glass opacity nodule. PLoS ONE, 2021, 16, e0253204.	2.5	1
95	Development and Performance Evaluation of Wearable Respiratory Self-Training System Using Patch Type Magnetic Sensor. Frontiers in Oncology, 2021, 11, 680147.	2.8	1
96	Integration of rotatable tandem applicator to conventional ovoid applicator toward complete framework of intensity modulated brachytherapy (IMBT) for cervical cancer. Physica Medica, 2021, 91, 131-139.	0.7	1
97	Heart-Sparing Capability and Positional Reproducibility of Continuous Positive Airway Pressure in Left-Sided Breast Radiation Therapy. Practical Radiation Oncology, 2022, 12, e368-e375.	2.1	1
98	Usefulness of Semi-cylindrical Beam Spoiler in Treatment of Early Glottic Cancer Using 6 MV Photon Beam. In Vivo, 2022, 36, 465-472.	1.3	1
99	Preliminary study of intensity weighted region-of-interesting image reconstruction using iterative algorithm. , 2013, , .		0
100	Development of Video Image-Guided Setup (VIGS) System for Tomotherapy: Preliminary Study. Progress in Medical Physics, 2013, 24, 85.	0.4	0
101	Feasibility study of patient-specific quality assurance system for high-dose-rate brachytherapy in patients with cervical cancer. Journal of the Korean Physical Society, 2016, 68, 1029-1036.	0.7	0
102	Abstract ID: 98 Measurement of the induced neutron ambient dose equivalent during proton therapy in scanning mode. Physica Medica, 2017, 42, 21-22.	0.7	0
103	Impact of the Respiratory Motion and Longitudinal Profile on Helical Tomotherapy. Progress in Medical Physics, 2018, 29, 1.	0.3	0
104	Dosimetric effect of MLC speed obtained with machine log files of VMAT delivery. Journal of Instrumentation, 2020, 15, P07005-P07005.	1.2	0
105	Adaptive Image Rescaling for Weakly Contrast-Enhanced Lesions in Dedicated Breast CT: A Phantom Study. Journal of the Korean Society of Radiology, 2021, 82, 1477.	0.2	0
106	Monitoring beam-quality constancy considering uncertainties associated with ionization chambers in Daily QA3 device. PLoS ONE, 2021, 16, e0246845.	2.5	0
107	Development of a Margin Determination Framework for Tumor-Tracking Radiation Therapy With Intraoperatively Implanted Fiducial Markers. Frontiers in Oncology, 2021, 11, 753246.	2.8	0
108	Effect of Parental Presence and Doctor's Conversation in Gastric Acidity and Volume Changes among Non - Crying Pediatric Surgical Patients. Daehan Macwi'gwa Haghoeji, 1993, 26, 149.	0.2	0

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109	Dosimetric Evaluation of an Automatically Converted Radiation Therapy Plan between Radixact Machines. <i>Progress in Medical Physics</i> , 2020, 31, 153-162.	0.3	0
110	Energy Spectrum of Electromagnetic Radiation for a Dual-Energy Cone-Beam Computed Tomography in Radiotherapy. <i>Journal of Magnetism</i> , 2020, 25, 614-619.	0.4	0
111	Sensitivity of radio-photoluminescence glass dosimeters to accumulated doses. <i>PLoS ONE</i> , 2020, 15, e0234829.	2.5	0
112	Feasibility of a 64-Channel Scintillation Fiber System for Real-Time Monitoring of Dwell Positions and Dwell Times of High-Dose-Rate Brachytherapy Sources. <i>IEEE Access</i> , 2022, 10, 730-740.	4.2	0
113	Clinical Application Study of Semi-cylindrical Beam Spoiler for Radiation Treatment of Early-stage Glottic Cancer Patients. <i>In Vivo</i> , 2022, 36, 1013-1017.	1.3	0
114	Title is missing!. , 2020, 15, e0230410.		0
115	Title is missing!. , 2020, 15, e0230410.		0
116	Title is missing!. , 2020, 15, e0230410.		0
117	Title is missing!. , 2020, 15, e0230410.		0