Kristy K Brock

List of Publications by Citations

89 papers	1,953 citations	22 h-index	42 g-index
99 ext. papers	2,491 ext. citations	3.5 avg, IF	5.18 L-index

#	Paper	IF	Citations
89	Use of image registration and fusion algorithms and techniques in radiotherapy: Report of the AAPM Radiation Therapy Committee Task Group No. 132. *Medical Physics*, **2017**, 44, e43-e76	4.4	341
88	Results of a multi-institution deformable registration accuracy study (MIDRAS). *International Journal of Radiation Oncology Biology Physics*, **2010**, 76, 583-96	4	300
87	Feasibility of a novel deformable image registration technique to facilitate classification, targeting, and monitoring of tumor and normal tissue. *International Journal of Radiation Oncology Biology Physics*, **2006**, 64, 1245-54	4	119
86	Demons deformable registration of CT and cone-beam CT using an iterative intensity matching approach. *Medical Physics*, **2011**, 38, 1785-98	4.4	64
85	Accumulated dose in liver stereotactic body radiotherapy: positioning, breathing, and deformation effects. *International Journal of Radiation Oncology Biology Physics*, **2012**, 83, 1132-40	4	58
84	A novel technique to enable experimental validation of deformable dose accumulation. *Medical Physics*, **2012**, 39, 765-76	4.4	50
83	Adaptive registration using local information measures. *Medical Image Analysis*, **2004**, 8, 465-73	15.4	44
82	Accuracy and sensitivity of finite element model-based deformable registration of the prostate. *Medical Physics*, **2008**, 35, 4019-25	4.4	43
81	Improving image-guided target localization through deformable registration. *Acta Oncologica*, **2008**, 47, 1279-85	3.2	42
80	Effect of deformable registration uncertainty on lung SBRT dose accumulation. *Medical Physics*, **2016**, 43, 233	4.4	37
79	Imaging and image-guided radiation therapy in liver cancer. *Seminars in Radiation Oncology*, **2011**, 21, 247-55	5.5	37
78	Hybrid adaptive radiotherapy with on-line MRI in cervix cancer IMRT. *Radiotherapy and Oncology*, **2014**, 110, 323-8	5.3	36
77	MR-guided prostate biopsy for planning of focal salvage after radiation therapy. *Radiology*, **2015**, 274, 181-91	20.5	34
76	Deformable image registration of heterogeneous human lung incorporating the bronchial tree. *Medical Physics*, **2010**, 37, 4560-71	4.4	34
75	Biomechanical-based image registration for head and neck radiation treatment. *Physics in Medicine and Biology*, **2010**, 55, 6491-500	3.8	32
74	Validation of biomechanical deformable image registration in the abdomen, thorax, and pelvis in a commercial radiotherapy treatment planning system. *Medical Physics*, **2017**, 44, 3407-3417	4.4	31
73	The VAMPIRE challenge: A multi-institutional validation study of CT ventilation imaging. *Medical Physics*, **2019**, 46, 1198-1217	4.4	29

72	Dosimetrically triggered adaptive intensity modulated radiation therapy for cervical cancer. *International Journal of Radiation Oncology Biology Physics*, **2014**, 90, 147-54	4	26
71	Adaptive management of liver cancer radiotherapy. *Seminars in Radiation Oncology*, **2010**, 20, 107-15	5.5	26
70	A hybrid biomechanical intensity based deformable image registration of lung 4DCT. *Physics in Medicine and Biology*, **2015**, 60, 3359-73	3.8	24
69	Accumulated Delivered Dose Response of Stereotactic Body Radiation Therapy for Liver Metastases. *International Journal of Radiation Oncology Biology Physics*, **2015**, 93, 639-48	4	24
68	Biomechanical deformable image registration of longitudinal lung CT images using vessel information. *Physics in Medicine and Biology*, **2016**, 61, 4826-39	3.8	23
67	Enhancing safety and quality through preplanning peer review for patients undergoing stereotactic body radiation therapy. *Practical Radiation Oncology*, **2016**, 6, e39-46	2.8	21
66	Dose escalated liver stereotactic body radiation therapy at the mean respiratory position. *International Journal of Radiation Oncology Biology Physics*, **2014**, 89, 1121-1128	4	21
65	Early Changes in Serial CBCT-Measured Parotid Gland Biomarkers Predict Chronic Xerostomia After Head and Neck Radiation Therapy. *International Journal of Radiation Oncology Biology Physics*, **2018**, 102, 1319-1329	4	20
64	Magnetic Resonance-based Response Assessment and Dose Adaptation in Human Papilloma Virus Positive Tumors of the Oropharynx treated with Radiotherapy (MR-ADAPTOR): An R-IDEAL stage 2a-2b/Bayesian phase II trial. *Clinical and Translational Radiation Oncology*, **2018**, 13, 19-23	4.6	20
63	Point: Principles of magnetic resonance imaging integration in a computed tomography-based radiotherapy workflow. *Seminars in Radiation Oncology*, **2014**, 24, 169-74	5.5	19
62	Image registration in intensity- modulated, image-guided and stereotactic body radiation therapy. *Frontiers of Radiation Therapy and Oncology*, **2007**, 40, 94-115		19
61	MR imaging correlates of intratumoral tissue types within colorectal liver metastases: a high-spatial-resolution fresh ex vivo radiologic-pathologic correlation study. *Radiology*, **2010**, 254, 747-54	20.5	18
60	Automatic Segmentation Using Deep Learning to Enable Online Dose Optimization During Adaptive Radiation Therapy of Cervical Cancer. *International Journal of Radiation Oncology Biology Physics*, **2021**, 109, 1096-1110	4	15
59	Technical note: fiducial markers for correlation of whole-specimen histopathology with MR imaging at 7 tesla. *Medical Physics*, **2010**, 37, 2321-8	4.4	13
58	On the Fuzziness of Machine Learning, Neural Networks, and Artificial Intelligence in Radiation Oncology. *International Journal of Radiation Oncology Biology Physics*, **2018**, 100, 1-4	4	13
57	Implementing Radiation Dose-Volume Liver Response in Biomechanical Deformable Image Registration. *International Journal of Radiation Oncology Biology Physics*, **2017**, 99, 1004-1012	4	12
56	Prospective study of the feasibility and dosimetric advantages of MRI-guided dose adaptation for human papillomavirus positive oropharyngeal cancer patients compared with standard IMRT. *Clinical and Translational Radiation Oncology*, **2018**, 11, 11-18	4.6	12
55	Utility and validation of biomechanical deformable image registration in low-contrast images. *Practical Radiation Oncology*, **2015**, 5, e401-8	2.8	11

54	Deformable image registration-based contour propagation yields clinically acceptable plans for MRI-based cervical cancer brachytherapy planning. *Brachytherapy*, **2018**, 17, 360-367	2.4	11
53	Quasi-static magnetic resonance elastography at 7 T to measure the effect of pathology before and after fixation on tissue biomechanical properties. *Magnetic Resonance in Medicine*, **2012**, 68, 152-65	4.4	11
52	Dosimetric Analysis and Normal-Tissue Complication Probability Modeling of Child-Pugh Score and Albumin-Bilirubin Grade Increase After Hepatic Irradiation. *International Journal of Radiation Oncology Biology Physics*, **2020**, 107, 986-995	4	11
51	Pulse sequence considerations for simulation and postimplant dosimetry of prostate brachytherapy. *Brachytherapy*, **2017**, 16, 743-753	2.4	10
50	Feasibility of 4D perfusion CT imaging for the assessment of liver treatment response following SBRT and sorafenib. *Advances in Radiation Oncology*, **2016**, 1, 194-203	3.3	10
49	Simplified strategies to determine the mean respiratory position for liver radiation therapy planning. *Practical Radiation Oncology*, **2014**, 4, 160-166	2.8	10
48	Radiation dose response simulation for biomechanical-based deformable image registration of head and neck cancer treatment. *Physics in Medicine and Biology*, **2015**, 60, 8481-9	3.8	10
47	Reconstruction of 3D lung models from 2D planning data sets for Hodgkin's lymphoma patients using combined deformable image registration and navigator channels. *Medical Physics*, **2010**, 37, 1017-28	4.4	10
46	Technical Note: Method to correlate whole-specimen histopathology of radical prostatectomy with diagnostic MR imaging. *Medical Physics*, **2016**, 43, 1065-72	4.4	10
45	Lung Density Analysis Using Quantitative Chest CT for Early Prediction of Chronic Lung Allograft Dysfunction. *Transplantation*, **2019**, 103, 2645-2653	1.8	10
44	Decreased Lung Perfusion After Breast/Chest Wall Irradiation: Quantitative Results From a Prospective Clinical Trial. *International Journal of Radiation Oncology Biology Physics*, **2017**, 97, 296-302	4	9
43	Prospective quantitative quality assurance and deformation estimation of MRI-CT image registration in simulation of head and neck radiotherapy patients. *Clinical and Translational Radiation Oncology*, **2019**, 18, 120-127	4.6	9
42	Evaluating the extent of cell death in 3D high frequency ultrasound by registration with whole-mount tumor histopathology. *Medical Physics*, **2010**, 37, 4288-97	4.4	9
41	A comparison of computer-controlled versus manual on-line patient setup adjustment. *Journal of Applied Clinical Medical Physics*, **2002**, 3, 241	2.3	9
40	Effect of setup and inter-fraction anatomical changes on the accumulated dose in CT-guided breath-hold intensity modulated proton therapy of liver malignancies. *Radiotherapy and Oncology*, **2019**, 134, 101-109	5.3	8
39	Methods for Reducing Normal Tissue Complication Probabilities in Oropharyngeal Cancer: Dose Reduction or Planning Target Volume Elimination. *International Journal of Radiation Oncology Biology Physics*, **2016**, 96, 645-52	4	8
38	Predictive Models to Determine Clinically Relevant Deviations in Delivered Dose for Head and Neck Cancer. *Practical Radiation Oncology*, **2019**, 9, e422-e431	2.8	7
37	Quantitative chest CT for subtyping chronic lung allograft dysfunction and its association with survival. *Clinical Transplantation*, **2018**, 32, e13233	3.8	7

36	Navigator channel adaptation to reconstruct three dimensional heart volumes from two dimensional radiotherapy planning data. *BMC Medical Physics*, **2012**, 12, 1		7
35	Automatic contouring system for cervical cancer using convolutional neural networks. *Medical Physics*, **2020**, 47, 5648-5658	4.4	6
34	Automated Contouring of Contrast and Noncontrast Computed Tomography Liver Images With Fully Convolutional Networks. *Advances in Radiation Oncology*, **2021**, 6, 100464	3.3	6
33	Accuracy of deformable image registration techniques for alignment of longitudinal cholangiocarcinoma CT images. *Medical Physics*, **2020**, 47, 1670-1679	4.4	5
32	Deformable mapping technique to correlate lesions in digital breast tomosynthesis and automated breast ultrasound images. *Medical Physics*, **2018**, 45, 4402-4417	4.4	5
31	Assessment of nonrespiratory stomach motion in healthy volunteers in fasting and postprandial states. *Practical Radiation Oncology*, **2014**, 4, 288-293	2.8	5
30	Vasculature-Driven Biomechanical Deformable Image Registration of Longitudinal Liver Cholangiocarcinoma Computed Tomographic Scans. *Advances in Radiation Oncology*, **2020**, 5, 269-278	3.3	5
29	Multi-energy computed tomography and material quantification: Current barriers and opportunities for advancement. *Medical Physics*, **2020**, 47, 3752-3771	4.4	4
28	The role of biomechanical anatomical modeling via computed tomography for identification of restrictive allograft syndrome. *Clinical Transplantation*, **2017**, 31, e13027	3.8	4
27	Deformable mapping using biomechanical models to relate corresponding lesions in digital breast tomosynthesis and automated breast ultrasound images. *Medical Image Analysis*, **2020**, 60, 101599	15.4	4
26	A simulation study to assess the potential impact of developing normal tissue complication probability models with accumulated dose. *Advances in Radiation Oncology*, **2018**, 3, 662-672	3.3	4
25	Technical Note: A step-by-step guide to Temporally Feathered Radiation Therapy planning for head and neck cancer. *Journal of Applied Clinical Medical Physics*, **2020**, 21, 209-215	2.3	3
24	Detection of Glioblastoma Subclinical Recurrence Using Serial Diffusion Tensor Imaging. *Cancers*, **2020**, 12,	6.6	3
23	Oncology scan--bringing rapid learning and adaptive techniques into clinical physics. *International Journal of Radiation Oncology Biology Physics*, **2014**, 90, 243-5	4	3
22	Preliminary evaluation of biomechanical modeling of lung deflation during minimally invasive surgery using pneumothorax computed tomography scans. *Physics in Medicine and Biology*, **2020**, 65, 225010	3.8	3
21	The Effect of Slice Thickness on Contours of Brain Metastases for Stereotactic Radiosurgery. *Advances in Radiation Oncology*, **2021**, 6, 100708	3.3	3
20	Analysis of the 2017 American Society for Radiation Oncology (ASTRO) Research Portfolio. *International Journal of Radiation Oncology Biology Physics*, **2019**, 103, 297-304	4	2
19	Modeling Complex Deformations of the Sigmoid Colon Between External Beam Radiation Therapy and Brachytherapy Images of Cervical Cancer. *International Journal of Radiation Oncology Biology Physics*, **2020**, 106, 1084-1094	4	2

18	Technique for Accurate GTV Definition in MR-Guided HDR Prostate Brachytherapy. *Brachytherapy*, **2010**, 9, S24-S25	2.4	2
17	Simple Python Module for Conversions Between DICOM Images and Radiation Therapy Structures, Masks, and Prediction Arrays. *Practical Radiation Oncology*, **2021**, 11, 226-229	2.8	2
16	Mapping lung ventilation through stress maps derived from biomechanical models of the lung. *Medical Physics*, **2021**, 48, 715-723	4.4	2
15	A novel use of biomechanical model-based deformable image registration (DIR) for assessing colorectal liver metastases ablation outcomes. *Medical Physics*, **2021**, 48, 6226-6236	4.4	2
14	Geometric and dosimetric accuracy of deformable image registration between average-intensity images for 4DCT-based adaptive radiotherapy for non-small cell lung cancer. *Journal of Applied Clinical Medical Physics*, **2021**, 22, 156-167	2.3	1
13	Responses to the 2018 and 2019 "One Big Discovery" Question: ASTRO Membership's Opinions on the Most Important Research Question Facing Radiation Oncology—Where Are We Headed?. *International Journal of Radiation Oncology Biology Physics*, **2021**, 109, 38-40	4	1
12	MRI evaluation of normal tissue deformation and breathing motion under an abdominal compression device. *Journal of Applied Clinical Medical Physics*, **2021**, 22, 90-97	2.3	1
11	Contemporary evidence on colorectal liver metastases ablation: toward a paradigm shift in locoregional treatment.. *International Journal of Hyperthermia*, **2022**, 39, 649-663	3.7	1
10	Automatic contouring QA method using a deep learning-based autocontouring system.. *Journal of Applied Clinical Medical Physics*, **2022**, e13647	2.3	1
9	Deformable Mapping Method to Relate Lesions in Dedicated Breast CT Images to Those in Automated Breast Ultrasound and Digital Breast Tomosynthesis Images. *Ultrasound in Medicine and Biology*, **2020**, 46, 750-765	3.5	0
8	Responses to the 2017 "1 Million Gray Question": ASTRO Membership's Opinions on the Most Important Research Question Facing Radiation Oncology. *International Journal of Radiation Oncology Biology Physics*, **2018**, 102, 249-250	4	0
7	Detection of vessel bifurcations in CT scans for automatic objective assessment of deformable image registration accuracy. *Medical Physics*, **2021**, 48, 5935-5946	4.4	0
6	Biomechanical modeling of neck flexion for deformable alignment of the salivary glands in head and neck cancer images. *Physics in Medicine and Biology*, **2019**, 64, 175018	3.8	
5	Overview and a Word of Thanks. *Medical Physics*, **2013**, 40, 4-5	4.4	
4	Introduction and a Word of Thanks. *Medical Physics*, **2012**, 39, 3526-3526	4.4	
3	Technical Advances in Oncology Outside of Radiation Medicine. *International Journal of Radiation Oncology Biology Physics*, **2016**, 95, 1323-1326	4	
2	Correlation of in-vivo imaging with histopathology: A review. *European Journal of Radiology*, **2021**, 144, 109964	4.7	
1	Technical Note: Histological validation of anatomical imaging for breast modeling using a novel cryo-microtome. *Medical Physics*, **2021**, 48, 7323-7332	4.4	