Paul J Keall

List of Publications by Citations

387 papers	12,838 citations	55 h-index	101 g-index
427 ext. papers	14,684 ext. citations	3.3 avg, IF	6.37 L-index

#	Paper	IF	Citations
387	The management of respiratory motion in radiation oncology report of AAPM Task Group 76. *Medical Physics*, **2006**, 33, 3874-900	4.4	1455
386	Stereotactic body radiation therapy: the report of AAPM Task Group 101. *Medical Physics*, **2010**, 37, 4078-101	4.4	1177
385	Report of the AAPM Task Group No. 105: Issues associated with clinical implementation of Monte Carlo-based photon and electron external beam treatment planning. *Medical Physics*, **2007**, 34, 4818-53	4.4	448
384	4-dimensional computed tomography imaging and treatment planning. *Seminars in Radiation Oncology*, **2004**, 14, 81-90	5.5	391
383	Four-dimensional radiotherapy planning for DMLC-based respiratory motion tracking. *Medical Physics*, **2005**, 32, 942-51	4.4	244
382	The Australian magnetic resonance imaging-linac program. *Seminars in Radiation Oncology*, **2014**, 24, 203-6	5.5	234
381	Patient training in respiratory-gated radiotherapy. *Medical Dosimetry*, **2003**, 28, 7-11	1.3	208
380	Audio-visual biofeedback for respiratory-gated radiotherapy: impact of audio instruction and audio-visual biofeedback on respiratory-gated radiotherapy. *International Journal of Radiation Oncology Biology Physics*, **2006**, 65, 924-33	4	201
379	Retrospective analysis of artifacts in four-dimensional CT images of 50 abdominal and thoracic radiotherapy patients. *International Journal of Radiation Oncology Biology Physics*, **2008**, 72, 1250-8	4	186
378	Dosimetric considerations for patients with HIP prostheses undergoing pelvic irradiation. Report of the AAPM Radiation Therapy Committee Task Group 63. *Medical Physics*, **2003**, 30, 1162-82	4.4	168
377	Geometric accuracy of a real-time target tracking system with dynamic multileaf collimator tracking system. *International Journal of Radiation Oncology Biology Physics*, **2006**, 65, 1579-84	4	149
376	An analysis of thoracic and abdominal tumour motion for stereotactic body radiotherapy patients. *Physics in Medicine and Biology*, **2008**, 53, 3623-40	3.8	138
375	Management of three-dimensional intrafraction motion through real-time DMLC tracking. *Medical Physics*, **2008**, 35, 2050-61	4.4	132
374	The first clinical implementation of electromagnetic transponder-guided MLC tracking. *Medical Physics*, **2014**, 41, 020702	4.4	125
373	Hypofractionation results in reduced tumor cell kill compared to conventional fractionation for tumors with regions of hypoxia. *International Journal of Radiation Oncology Biology Physics*, **2011**, 79, 1188-95	4	122
372	Monte Carlo computation of dosimetric amorphous silicon electronic portal images. *Medical Physics* , **2004**, 31, 2135-46	4.4	105
371	First demonstration of combined kV/MV image-guided real-time dynamic multileaf-collimator target tracking. *International Journal of Radiation Oncology Biology Physics*, **2009**, 74, 859-67	4	104

370	Impact of four-dimensional computed tomography pulmonary ventilation imaging-based functional avoidance for lung cancer radiotherapy. *International Journal of Radiation Oncology Biology Physics*, **2011**, 79, 279-88	4	102
369	Tumor and normal tissue motion in the thorax during respiration: Analysis of volumetric and positional variations using 4D CT. *International Journal of Radiation Oncology Biology Physics*, **2007**, 67, 296-307	4	97
368	A method for photon beam Monte Carlo multileaf collimator particle transport. *Physics in Medicine and Biology*, **2002**, 47, 3225-49	3.8	95
367	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, 575-82	4	94
366	Comparisons between MCNP, EGS4 and experiment for clinical electron beams. *Physics in Medicine and Biology*, **1999**, 44, 705-17	3.8	91
365	A new formula for normal tissue complication probability (NTCP) as a function of equivalent uniform dose (EUD). *Physics in Medicine and Biology*, **2008**, 53, 23-36	3.8	87
364	A method for determining multileaf collimator transmission and scatter for dynamic intensity modulated radiotherapy. *Medical Physics*, **2000**, 27, 2231-41	4.4	86
363	Determining the incident electron fluence for Monte Carlo-based photon treatment planning using a standard measured data set. *Medical Physics*, **2003**, 30, 574-82	4.4	84
362	A Monte Carlo study of radiation transport through multileaf collimators. *Medical Physics*, **2001**, 28, 2497-506	4.4	82
361	The effect of dose calculation accuracy on inverse treatment planning. *Physics in Medicine and Biology*, **2002**, 47, 391-407	3.8	80
360	Kilovoltage intrafraction monitoring for prostate intensity modulated arc therapy: first clinical results. *International Journal of Radiation Oncology Biology Physics*, **2012**, 84, e655-61	4	79
359	A method of dose reconstruction for moving targets compatible with dynamic treatments. *Medical Physics*, **2012**, 39, 6237-46	4.4	76
358	The first patient treatment of electromagnetic-guided real time adaptive radiotherapy using MLC tracking for lung SABR. *Radiotherapy and Oncology*, **2016**, 121, 19-25	5.3	75
357	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, 1587-96	4	75
356	Design and evaluation of a variable aperture collimator for conformal radiotherapy of small animals using a microCT scanner. *Medical Physics*, **2007**, 34, 4359-67	4.4	75
355	Future of medical physics: Real-time MRI-guided proton therapy. *Medical Physics*, **2017**, 44, e77-e90	4.4	73
354	Three-dimensional prostate position estimation with a single x-ray imager utilizing the spatial probability density. *Physics in Medicine and Biology*, **2008**, 53, 4331-53	3.8	73
353	Modeling the truebeam linac using a CAD to Geant4 geometry implementation: dose and IAEA-compliant phase space calculations. *Medical Physics*, **2011**, 38, 4018-24	4.4	72

352	Development and preliminary evaluation of a prototype audiovisual biofeedback device incorporating a patient-specific guiding waveform. *Physics in Medicine and Biology*, **2008**, 53, N197-208	3.8	72
351	The clinical implementation of respiratory-gated intensity-modulated radiotherapy. *Medical Dosimetry*, **2006**, 31, 152-62	1.3	70
350	Effect of patient setup errors on simultaneously integrated boost head and neck IMRT treatment plans. *International Journal of Radiation Oncology Biology Physics*, **2005**, 63, 422-33	4	69
349	Incorporating multi-leaf collimator leaf sequencing into iterative IMRT optimization. *Medical Physics* , **2002**, 29, 952-9	4.4	68
348	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, 159-65	5.3	68
347	Three-dimensional MRI-linac intra-fraction guidance using multiple orthogonal cine-MRI planes. *Physics in Medicine and Biology*, **2013**, 58, 4943-50	3.8	65
346	Real-time DMLC IMRT delivery for mobile and deforming targets. *Medical Physics*, **2005**, 32, 3037-48	4.4	64
345	Dm rather than Dw should be used in Monte Carlo treatment planning. For the proposition. *Medical Physics*, **2002**, 29, 922-3	4.4	64
344	Pulmonary ventilation imaging based on 4-dimensional computed tomography: comparison with pulmonary function tests and SPECT ventilation images. *International Journal of Radiation Oncology Biology Physics*, **2014**, 90, 414-22	4	62
343	Validating and improving CT ventilation imaging by correlating with ventilation 4D-PET/CT using 68Ga-labeled nanoparticles. *Medical Physics*, **2014**, 41, 011910	4.4	62
342	The first clinical treatment with kilovoltage intrafraction monitoring (KIM): a real-time image guidance method. *Medical Physics*, **2015**, 42, 354-8	4.4	61
341	Development of a micro-computed tomography-based image-guided conformal radiotherapy system for small animals. *International Journal of Radiation Oncology Biology Physics*, **2010**, 78, 297-305	4	61
340	Real-time intrafraction motion monitoring in external beam radiotherapy. *Physics in Medicine and Biology*, **2019**, 64, 15TR01	3.8	60
339	The first patient treatment of computed tomography ventilation functional image-guided radiotherapy for lung cancer. *Radiotherapy and Oncology*, **2016**, 118, 227-31	5.3	59
338	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, 600-7	4	59
337	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, 914-23	4	58
336	Real-time dynamic MLC tracking for inversely optimized arc radiotherapy. *Radiotherapy and Oncology*, **2010**, 94, 218-23	5.3	57
335	Online prediction of respiratory motion: multidimensional processing with low-dimensional feature learning. *Physics in Medicine and Biology*, **2010**, 55, 3011-25	3.8	56

334	Investigation of four-dimensional computed tomography-based pulmonary ventilation imaging in patients with emphysematous lung regions. *Physics in Medicine and Biology*, **2011**, 56, 2279-98	3.8	56
333	Electromagnetic-guided dynamic multileaf collimator tracking enables motion management for intensity-modulated arc therapy. *International Journal of Radiation Oncology Biology Physics*, **2011**, 79, 312-20	4	55
332	Computational challenges for image-guided radiation therapy: framework and current research. *Seminars in Radiation Oncology*, **2007**, 17, 245-57	5.5	55
331	Multileaf Collimator Tracking Improves Dose Delivery for Prostate Cancer Radiation Therapy: Results of the First Clinical Trial. *International Journal of Radiation Oncology Biology Physics*, **2015**, 92, 1141-1147	4	54
330	Failure mode and effect analysis-based quality assurance for dynamic MLC tracking systems. *Medical Physics*, **2010**, 37, 6466-79	4.4	53
329	Four-dimensional computed tomography pulmonary ventilation images vary with deformable image registration algorithms and metrics. *Medical Physics*, **2011**, 38, 1348-58	4.4	53
328	Monte Carlo-based inverse treatment planning. *Physics in Medicine and Biology*, **1999**, 44, 1885-96	3.8	52
327	Motion prediction in MRI-guided radiotherapy based on interleaved orthogonal cine-MRI. *Physics in Medicine and Biology*, **2016**, 61, 872-87	3.8	52
326	Detailed analysis of latencies in image-based dynamic MLC tracking. *Medical Physics*, **2010**, 37, 4998-5005	4.4	51
325	Superposition dose calculation incorporating Monte Carlo generated electron track kernels. *Medical Physics*, **1996**, 23, 479-85	4.4	49
324	Six degrees-of-freedom prostate and lung tumor motion measurements using kilovoltage intrafraction monitoring. *International Journal of Radiation Oncology Biology Physics*, **2015**, 91, 368-75	4	48
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322	Displacement-based binning of time-dependent computed tomography image data sets. *Medical Physics*, **2006**, 33, 235-46	4.4	48
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319	Proton beam deflection in MRI fields: Implications for MRI-guided proton therapy. *Medical Physics*, **2015**, 42, 2113-24	4.4	46
318	Electron contamination modeling and skin dose in 6 MV longitudinal field MRIgRT: Impact of the MRI and MRI fringe field. *Medical Physics*, **2012**, 39, 874-90	4.4	46
317	Toward the development of intrafraction tumor deformation tracking using a dynamic multi-leaf collimator. *Medical Physics*, **2014**, 41, 061703	4.4	45

316	4D CT lung ventilation images are affected by the 4D CT sorting method. *Medical Physics*, **2013**, 40, 101907	4.4	45
315	Radiotherapy dose calculations in the presence of hip prostheses. *Medical Dosimetry*, **2003**, 28, 107-12	1.3	45
314	Dynamic MLC tracking of moving targets with a single kV imager for 3D conformal and IMRT treatments. *Acta Oncologica*, **2010**, 49, 1092-100	3.2	44
313	Monte Carlo source model for photon beam radiotherapy: photon source characteristics. *Medical Physics*, **2004**, 31, 3106-21	4.4	44
312	Real-time prostate trajectory estimation with a single imager in arc radiotherapy: a simulation study. *Physics in Medicine and Biology*, **2009**, 54, 4019-35	3.8	43
311	The effect of statistical uncertainty on inverse treatment planning based on Monte Carlo dose calculation. *Physics in Medicine and Biology*, **2000**, 45, 3601-13	3.8	43
310	Reproducibility of four-dimensional computed tomography-based lung ventilation imaging. *Academic Radiology*, **2012**, 19, 1554-65	4.3	42
309	DMLC motion tracking of moving targets for intensity modulated arc therapy treatment: a feasibility study. *Acta Oncologica*, **2009**, 48, 245-50	3.2	42
308	Medical physics challenges in clinical MR-guided radiotherapy. *Radiation Oncology*, **2020**, 15, 93	4.2	41
307	Markerless EPID image guided dynamic multi-leaf collimator tracking for lung tumors. *Physics in Medicine and Biology*, **2013**, 58, 4195-204	3.8	40
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304	IGRT and motion management during lung SBRT delivery. *Physica Medica*, **2017**, 44, 113-122	2.7	39
303	A longitudinal four-dimensional computed tomography and cone beam computed tomography dataset for image-guided radiation therapy research in lung cancer. *Medical Physics*, **2017**, 44, 762-771	4.4	39
302	Audiovisual biofeedback improves diaphragm motion reproducibility in MRI. *Medical Physics*, **2012**, 39, 6921-8	4.4	39
301	Super-Monte Carlo: a 3-D electron beam dose calculation algorithm. *Medical Physics*, **1996**, 23, 2023-34	4.4	39
300	An analysis of 6-MV versus 18-MV photon energy plans for intensity-modulated radiation therapy (IMRT) of lung cancer. *Radiotherapy and Oncology*, **2007**, 82, 55-62	5.3	38
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297	Four-dimensional IMRT treatment planning using a DMLC motion-tracking algorithm. *Physics in Medicine and Biology*, **2009**, 54, 3821-35	3.8	37
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295	Four-dimensional inverse treatment planning with inclusion of implanted fiducials in IMRT segmented fields. *Medical Physics*, **2009**, 36, 2215-21	4.4	37
294	Real-Time 3D Image Guidance Using a Standard LINAC: Measured Motion, Accuracy, and Precision of the First Prospective Clinical Trial of Kilovoltage Intrafraction Monitoring-Guided Gating for Prostate Cancer Radiation Therapy. *International Journal of Radiation Oncology Biology Physics*, **2016**, 94, 1015-21	4	37
293	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, 269-78	4	36
292	Technical Note: Experimental results from a prototype high-field inline MRI-linac. *Medical Physics*, **2016**, 43, 5188	4.4	36
291	The first clinical implementation of real-time image-guided adaptive radiotherapy using a standard linear accelerator. *Radiotherapy and Oncology*, **2018**, 127, 6-11	5.3	35
290	Electron contamination modeling and reduction in a 1 T open bore inline MRI-linac system. *Medical Physics*, **2014**, 41, 051708	4.4	35
289	DMLC tracking and gating can improve dose coverage for prostate VMAT. *Medical Physics*, **2014**, 41, 091705	4.4	35
288	Both four-dimensional computed tomography and four-dimensional cone beam computed tomography under-predict lung target motion during radiotherapy. *Radiotherapy and Oncology*, **2019**, 135, 65-73	5.3	33
287	Investigating the feasibility of rapid MRI for image-guided motion management in lung cancer radiotherapy. *BioMed Research International*, **2014**, 2014, 485067	3	33
286	Improving IMRT dose accuracy via deliverable Monte Carlo optimization for the treatment of head and neck cancer patients. *Medical Physics*, **2006**, 33, 4033-43	4.4	33
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283	Locating and targeting moving tumors with radiation beams. *Medical Physics*, **2008**, 35, 5684-94	4.4	32
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279	A method for robust segmentation of arbitrarily shaped radiopaque structures in cone-beam CT projections. *Medical Physics*, **2011**, 38, 2151-6	4.4	31
278	Accuracy in the localization of thoracic and abdominal tumors using respiratory displacement, velocity, and phase. *Medical Physics*, **2009**, 36, 386-93	4.4	30
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276	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?. *International Journal of Radiation Oncology Biology Physics*, **2018**, 102, 922-931	4	29
275	Radiotherapy beyond cancer: target localization in real-time MRI and treatment planning for cardiac radiosurgery. *Medical Physics*, **2014**, 41, 120702	4.4	29
274	Accounting for primary electron scatter in x-ray beam convolution calculations. *Medical Physics*, **1995**, 22, 1413-8	4.4	29
273	The VAMPIRE challenge: A multi-institutional validation study of CT ventilation imaging. *Medical Physics*, **2019**, 46, 1198-1217	4.4	29
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266	Measuring interfraction and intrafraction lung function changes during radiation therapy using four-dimensional cone beam CT ventilation imaging. *Medical Physics*, **2015**, 42, 1255-67	4.4	27
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260	Audiovisual Biofeedback Improves Cine-Magnetic Resonance Imaging Measured Lung Tumor Motion Consistency. *International Journal of Radiation Oncology Biology Physics*, **2016**, 94, 628-36	4	25
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258	Photon-beam subsource sensitivity to the initial electron-beam parameters. *Medical Physics*, **2005**, 32, 1164-75	4.4	25
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255	Point/counterpoint. Respiratory gating for radiation therapy is not ready for prime time. *Medical Physics*, **2007**, 34, 867-70	4.4	24
254	Dose enhancement in radiotherapy of small lung tumors using inline magnetic fields: A Monte Carlo based planning study. *Medical Physics*, **2016**, 43, 368	4.4	23
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252	Optimizing 4D cone beam computed tomography acquisition by varying the gantry velocity and projection time interval. *Physics in Medicine and Biology*, **2013**, 58, 1705-23	3.8	23
251	A study of the effect of in-line and perpendicular magnetic fields on beam characteristics of electron guns in medical linear accelerators. *Medical Physics*, **2011**, 38, 4174-85	4.4	23
250	Geometric accuracy of dynamic MLC tracking with an implantable wired electromagnetic transponder. *Acta Oncologica*, **2011**, 50, 944-51	3.2	23
249	See, Think, and Act: Real-Time Adaptive Radiotherapy. *Seminars in Radiation Oncology*, **2019**, 29, 228-235	5.5	22
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228	The dosimetric impact of inversely optimized arc radiotherapy plan modulation for real-time dynamic MLC tracking delivery. *Medical Physics*, **2012**, 39, 1588-94	4.4	18
227	The impact of audio-visual biofeedback on 4D PET images: results of a phantom study. *Medical Physics*, **2012**, 39, 1046-57	4.4	18

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221	Audiovisual biofeedback improves motion prediction accuracy. *Medical Physics*, **2013**, 40, 041705	4.4	16
220	Image-based retrospective 4D MRI in external beam radiotherapy: A comparative study with a digital phantom. *Medical Physics*, **2018**, 45, 3161-3172	4.4	16
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