Aimee Louise McNamara

List of Publications by Year
in descending order

56	1,552	304743	315739
papers	citations	22 h-index	38 g-index

57	57	57	1434
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A phenomenological relative biological effectiveness (RBE) model for proton therapy based on all publishedin vitrocell survival data. Physics in Medicine and Biology, 2015, 60, 8399-8416.	3.0	246
2	The TOPAS tool for particle simulation, a Monte Carlo simulation tool for physics, biology and clinical research. Physica Medica, 2020, 72, 114-121.	0.7	126
3	TOPAS-nBio: An Extension to the TOPAS Simulation Toolkit for Cellular and Sub-cellular Radiobiology. Radiation Research, 2018, 191, 125.	1.5	124
4	Validation of the radiobiology toolkit TOPAS-nBio in simple DNA geometries. Physica Medica, 2017, 33, 207-215.	0.7	70
5	Dependence of gold nanoparticle radiosensitization on cell geometry. Nanoscale, 2017, 9, 5843-5853.	5.6	61
6	Monte Carlo simulation of chemistry following radiolysis with TOPAS-nBio. Physics in Medicine and Biology, 2018, 63, 105014.	3.0	58
7	Extension of TOPAS for the simulation of proton radiation effects considering molecular and cellular endpoints. Physics in Medicine and Biology, 2015, 60, 5053-5070.	3.0	56
8	Characterization of proton pencil beam scanning and passive beam using a high spatial resolution solidâ€state microdosimeter. Medical Physics, 2017, 44, 6085-6095.	3.0	53
9	End-of-Range Radiobiological Effect on Rib Fractures in Patients Receiving Proton Therapy for Breast Cancer. International Journal of Radiation Oncology Biology Physics, 2020, 107, 449-454.	0.8	51
10	A general mechanistic model enables predictions of the biological effectiveness of different qualities of radiation. Scientific Reports, 2017, 7, 10790.	3.3	50
11	Dose enhancement effects to the nucleus and mitochondria from gold nanoparticles in the cytosol. Physics in Medicine and Biology, 2016, 61, 5993-6010.	3.0	49
12	A New Standard DNA Damage (SDD) Data Format. Radiation Research, 2018, 191, 76.	1.5	49
13	X-ray polarization in relativistic jets. Monthly Notices of the Royal Astronomical Society, 2009, 395, 1507-1514.	4.4	44
14	Geometrical structures for radiation biology research as implemented in the TOPAS-nBio toolkit. Physics in Medicine and Biology, 2018, 63, 175018.	3.0	36
15	Radio-enhancement by gold nanoparticles and their impact on water radiolysis for x-ray, proton and carbon-ion beams. Physics in Medicine and Biology, 2019, 64, 175005.	3.0	36
16	Modelling variable proton relative biological effectiveness for treatment planning. British Journal of Radiology, 2020, 93, 20190334.	2.2	35
17	A parameter sensitivity study for simulating DNA damage after proton irradiation using TOPAS-nBio. Physics in Medicine and Biology, 2020, 65, 085015.	3.0	31
18	Cellular Response to Proton Irradiation: A Simulation Study with TOPAS-nBio. Radiation Research, 2020, 194, 9.	1.5	30

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19	The microdosimetric extension in TOPAS: development and comparison with published data. Physics in Medicine and Biology, 2019, 64, 145004.	3.0	26
20	A tumor-immune interaction model for hepatocellular carcinoma based on measured lymphocyte counts in patients undergoing radiotherapy. Radiotherapy and Oncology, 2020, 151, 73-81.	0.6	26
21	Radiation damage on sub-cellular scales: beyond DNA. Physics in Medicine and Biology, 2013, 58, 1251-1267.	3.0	24
22	Predicted ionisation in mitochondria and observed acute changes in the mitochondrial transcriptome after gamma irradiation: A Monte Carlo simulation and quantitative PCR study. Mitochondrion, 2013, 13, 736-742.	3.4	23
23	Characterization of a novel EPID designed for simultaneous imaging and dose verification in radiotherapy. Medical Physics, 2013, 40, 091902.	3.0	23
24	Characterization of optical transport effects on EPID dosimetry using Geant4. Medical Physics, 2013, 40, 041708.	3.0	22
25	Polarisation-based coincidence event discrimination: anin silicostudy towards a feasible scheme for Compton-PET. Physics in Medicine and Biology, 2016, 61, 5803-5817.	3.0	19
26	Towards optimal imaging with PET: anin silicofeasibility study. Physics in Medicine and Biology, 2014, 59, 7587-7600.	3.0	18
27	The determination of the efficiency of a Compton suppressed HPGe detector using Monte Carlo simulations. Journal of Environmental Radioactivity, 2012, 106, 1-7.	1.7	16
28	In SilicoNanodosimetry: New Insights into Nontargeted Biological Responses to Radiation. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-9.	1.3	15
29	X-ray polarization signatures of Compton scattering in magnetic cataclysmic variables. Monthly Notices of the Royal Astronomical Society, 2008, 386, 2167-2172.	4.4	12
30	A comparison of X-ray and proton beam low energy secondary electron track structures using the low energy models of Geant4. International Journal of Radiation Biology, 2012, 88, 164-170.	1.8	10
31	The cytoplasm as a radiation target: an in silico study of microbeam cell irradiation. Physics in Medicine and Biology, 2015, 60, 2325-2337.	3.0	10
32	Mitochondria as a target for radiosensitisation by gold nanoparticles. Journal of Physics: Conference Series, 2017, 777, 012008.	0.4	10
33	Comparing stochastic proton interactions simulated using TOPAS-nBio to experimental data from fluorescent nuclear track detectors. Physics in Medicine and Biology, 2017, 62, 3237-3249.	3.0	10
34	IMPACT OF NANOPARTICLE CLUSTERING ON DOSE RADIO-ENHANCEMENT. Radiation Protection Dosimetry, 2019, 183, 50-54.	0.8	10
35	The impact of variable relative biological effectiveness in proton therapy for left-sided breast cancer when estimating normal tissue complications in the heart and lung. Physics in Medicine and Biology, 2021, 66, 035023.	3.0	10
36	Polarization enhanced X-ray imaging for biomedicine. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 648, S208-S210.	1.6	9

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37	Feasibility study of a dual detector configuration concept for simultaneous megavoltage imaging and dose verification in radiotherapy. Medical Physics, 2015, 42, 1753-1764.	3.0	7
38	Perspectives on the model-based approach to proton therapy trials: A retrospective study of a lung cancer randomized trial. Radiotherapy and Oncology, 2020, 147, 8-14.	0.6	7
39	Compton scattering of Fe KÎ± lines in magnetic cataclysmic variables. Monthly Notices of the Royal Astronomical Society, 0, 383, 962-970.	4.4	6
40	Optimisation of the imaging and dosimetric characteristics of an electronic portal imaging device employing plastic scintillating fibres using Monte Carlo simulations. Physics in Medicine and Biology, 2014, 59, 6827-6840.	3.0	6
41	A high DQE waterâ€equivalent EPID employing an array of plasticâ€scintillating fibers for simultaneous imaging and dosimetry in radiotherapy. Medical Physics, 2018, 45, 2154-2168.	3.0	5
42	Monte Carlo simulation of the transit dosimetric response of an a-Si electronic portal imaging device. Journal of Physics: Conference Series, 2014, 489, 012005.	0.4	4
43	Challenges in the quantification approach to a radiation relevant adverse outcome pathway for lung cancer. International Journal of Radiation Biology, 2021, 97, 85-101.	1.8	4
44	Positron emission tomography coincidence detection with photon polarization correlation. Proceedings of SPIE, 2013, , .	0.8	3
45	A new concept in detector design for radiation therapy: Simultaneous imaging and dosimetry for comprehensive treatment verification. , 2013, , .		2
46	Revealing the underlying mechanism of microbeam radiation therapy with low energy Monte Carlo simulations. Journal of Physics: Conference Series, 2014, 489, 012018.	0.4	2
47	Investigation of Micron-Scale Radiotherapy Dose Deposition in the Lung: Effect of Magnetic Field and Nanoparticlesâ€"a Monte Carlo Simulation. Frontiers in Physics, 2022, 10, .	2.1	2
48	Particle detection and tracking with DNA. European Physical Journal C, 2022, 82, 1.	3.9	2
49	TH-C-BRA-11: First Experiments of a Prototype Device for Simultaneous Imaging and Dose Verification in Radiotherapy. Medical Physics, 2012, 39, 4002-4002.	3.0	1
50	SU-F-T-132: Variable RBE Models Predict Possible Underestimation of Vaginal Dose for Anal Cancer Patients Treated Using Single-Field Proton Treatments. Medical Physics, 2016, 43, 3492-3492.	3.0	1
51	Evaluating radiation damage to scintillating plastic fibers with Monte Carlo simulations. Proceedings of SPIE, 2013, , .	0.8	0
52	Hematologic Toxicities During Treatment Allow for Improved Prediction of Recurrences in Pediatric Medulloblastoma. International Journal of Radiation Oncology Biology Physics, 2017, 99, E591-E592.	0.8	0
53	An Increased Rib Fracture Rate in Patients Receiving Proton Therapy for Breast Cancer is Correlated with the End-of-range Radiobiological Effect. International Journal of Radiation Oncology Biology Physics, 2019, 105, E61.	0.8	0
54	SU-E-I-109: Sensitivity Analysis of an Electronic Portal Imaging Device Monte Carlo Model to Variations in Optical Transport Parameters. Medical Physics, 2012, 39, 3650-3650.	3.0	0

#	Article	IF	Citations
55	WE-H-BRA-07: Mechanistic Modelling of the Relative Biological Effectiveness of Heavy Charged Particles. Medical Physics, 2016, 43, 3844-3844.	3.0	0
56	WE-H-BRA-04: Biological Geometries for the Monte Carlo Simulation Toolkit TOPASNBio. Medical Physics, 2016, 43, 3843-3843.	3.0	0