

Klemens Zink

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

84
papers

1,132
citations

15
h-index

30
g-index

104
ext. papers

1,390
ext. citations

4
avg, IF

4.57
L-index

#	Paper	IF	Citations
84	Monte Carlo calculated beam quality correction factors for two cylindrical ionization chambers in photon beams.. <i>Physica Medica</i> , 2021 , 94, 17-23	2.7	1
83	Cema-based formalism for the determination of absorbed dose for high-energy photon beams. <i>Medical Physics</i> , 2021 , 48, 7461-7475	4.4	0
82	Compensating for beam modulation due to microscopic lung heterogeneities in carbon ion therapy treatment planning. <i>Medical Physics</i> , 2021 , 48, 8052	4.4	0
81	Prenatal radiation exposure in diagnostic and interventional radiology. <i>RoFo Fortschritte Auf Dem Gebiet Der Rontgenstrahlen Und Der Bildgebenden Verfahren</i> , 2021 , 193, 778-786	2.3	1
80	Monte Carlo calculation of perturbation correction factors for air-filled ionization chambers in clinical proton beams using TOPAS/GEANT. <i>Zeitschrift Fur Medizinische Physik</i> , 2021 , 31, 175-191	7.6	0
79	Monte Carlo simulations and dose measurements of 2D range-modulators for scanned particle therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2021 , 31, 203-214	7.6	6
78	Estimating the modulating effect of lung tissue in particle therapy using a clinical CT voxel histogram analysis. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	1
77	Calculation of the Beam-Modulation Effect of the Lung in Carbon Ion and Proton Therapy With Deterministic Pencil Beam Algorithms. <i>Frontiers in Physics</i> , 2020 , 8,	3.9	1
76	Optical range determination of clinical proton beams in water. A comparison with standard measurement methods. <i>Physica Medica</i> , 2020 , 73, 197-203	2.7	
75	A phantom based evaluation of the dose prediction and effects in treatment plans, when calculating on a direct density CT reconstruction. <i>Journal of Applied Clinical Medical Physics</i> , 2020 , 21, 52-61	2.3	1
74	Determination of consensus k values for megavoltage photon beams for the update of IAEA TRS-398. <i>Physics in Medicine and Biology</i> , 2020 , 65, 095011	3.8	10
73	Monte Carlo calculation of beam quality correction factors in proton beams using TOPAS/GEANT4. <i>Physics in Medicine and Biology</i> , 2020 , 65, 055015	3.8	6
72	Calculated beam quality correction factors for ionization chambers in MV photon beams. <i>Physics in Medicine and Biology</i> , 2020 , 65, 075003	3.8	4
71	Monte Carlo calculation of quality correction factors based on air kerma and absorbed dose to water in medium energy x-ray beams. <i>Physics in Medicine and Biology</i> , 2020 , 65, 245042	3.8	2
70	Technical note: Vendor-agnostic water phantom for 3D dosimetry of complex fields in particle therapy. <i>Journal of Applied Clinical Medical Physics</i> , 2020 , 21, 227-232	2.3	3
69	Beam Monitor Calibration for Radiobiological Experiments With Scanned High Energy Heavy Ion Beams at FAIR. <i>Frontiers in Physics</i> , 2020 , 8,	3.9	9
68	Quantification of the dependencies of the Bragg peak degradation due to lung tissue in proton therapy on a CT-based lung tumor phantom. <i>Physics in Medicine and Biology</i> , 2019 , 64, 155005	3.8	9

67	Fluence-weighted average subfield size in helical TomoTherapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2019 , 29, 337-348	7.6	
66	A Monte Carlo study on the PTW 60019 microDiamond detector. <i>Medical Physics</i> , 2019 , 46, 5159-5172	4.4	8
65	Comparison of penh, fluka, and Geant4/topas for absorbed dose calculations in air cavities representing ionization chambers in high-energy photon and proton beams. <i>Medical Physics</i> , 2019 , 46, 4639-4653	4.4	14
64	Measurement of PET isotope production cross sections for protons and carbon ions on carbon and oxygen targets for applications in particle therapy range verification. <i>Physics in Medicine and Biology</i> , 2019 , 64, 205012	3.8	11
63	Effects of the Bragg peak degradation due to lung tissue in proton therapy of lung cancer patients. <i>Radiation Oncology</i> , 2019 , 14, 183	4.2	8
62	Measurement of He4 charge- and mass-changing cross sections on H, C, O, and Si targets in the energy range 70-20 MeV/u for radiation transport calculations in ion-beam therapy. <i>Physical Review C</i> , 2019 , 99,	2.7	9
61	Experimental and Monte Carlo-based determination of the beam quality specifier for TomoTherapyHD treatment units. <i>Zeitschrift Fur Medizinische Physik</i> , 2018 , 28, 142-149	7.6	1
60	Decomposition of the dose conversion factor based on fluence spectra of secondary charged particles: Application to lateral dose profiles in photon fields. <i>Medical Physics</i> , 2018 , 45, 4246	4.4	5
59	Strahlenbelastung in der Schwangerschaft. <i>Onkologe</i> , 2018 , 24, 545-551	0.1	
58	Validation of new 2D ripple filters in proton treatments of spherical geometries and non-small cell lung carcinoma cases. <i>Physics in Medicine and Biology</i> , 2018 , 63, 245020	3.8	2
57	TOPAS/Geant4 configuration for ionization chamber calculations in proton beams. <i>Physics in Medicine and Biology</i> , 2018 , 63, 115013	3.8	13
56	Impact of new ICRU Report 90 recommendations on calculated correction factors for reference dosimetry. <i>Physics in Medicine and Biology</i> , 2018 , 63, 155015	3.8	14
55	The absorbed doses to water and the TLD-100 signal contributions associated with the neutron contamination of a clinical 18 MV photon beam. <i>Radiation Measurements</i> , 2017 , 106, 331-335	1.5	2
54	Modulation power of porous materials and usage as ripple filter in particle therapy. <i>Physics in Medicine and Biology</i> , 2017 , 62, 2892-2909	3.8	14
53	An efficient method to predict and include Bragg curve degradation due to lung-equivalent materials in Monte Carlo codes by applying a density modulation. <i>Physics in Medicine and Biology</i> , 2017 , 62, 3997-4016	3.8	11
52	Feasibility study of entrance and exit dose measurements at the contra lateral breast with alanine/electron spin resonance dosimetry in volumetric modulated radiotherapy of breast cancer. <i>Physics in Medicine and Biology</i> , 2017 , 62, 5462-5472	3.8	4
51	Monte Carlo-based investigations on the impact of removing the flattening filter on beam quality specifiers for photon beam dosimetry. <i>Medical Physics</i> , 2017 , 44, 2569-2580	4.4	5
50	Measurement of charge- and mass-changing cross sections for He4+C12 collisions in the energy range 80-20 MeV/u for applications in ion beam therapy. <i>Physical Review C</i> , 2017 , 96,	2.7	10

49	Poster session 15: Radiation therapy II. <i>Biomedizinische Technik</i> , 2017 , 62, s180-s189	1.3	
48	EURADOS intercomparison exercise on Monte Carlo modelling of a medical linear accelerator. <i>Annali Dell'istituto Superiore Di Sanita</i> , 2017 , 53, 314-321	1.6	2
47	3D range-modulator for scanned particle therapy: development, Monte Carlo simulations and experimental evaluation. <i>Physics in Medicine and Biology</i> , 2017 , 62, 7075-7096	3.8	26
46	On the neutron radiation field and air activation around a medical electron linac. <i>Radiation Protection Dosimetry</i> , 2017 , 174, 147-158	0.9	4
45	Determination of the ion recombination correction factor for intraoperative electron beams. <i>Zeitschrift Fur Medizinische Physik</i> , 2016 , 26, 35-44	7.6	11
44	Impact of fractionation and number of fields on dose homogeneity for intra-fractionally moving lung tumors using scanned carbon ion treatment. <i>Radiotherapy and Oncology</i> , 2016 , 118, 498-503	5.3	7
43	Scanned ion beam therapy for prostate carcinoma: Comparison of single plan treatment and daily plan-adapted treatment. <i>Strahlentherapie Und Onkologie</i> , 2016 , 192, 118-26	4.3	8
42	Dosimetric comparisons of carbon ion treatment plans for 1D and 2D ripple filters with variable thicknesses. <i>Physics in Medicine and Biology</i> , 2016 , 61, 4327-41	3.8	6
41	Response of the alanine/ESR dosimeter to radiation from an Ir-192 HDR brachytherapy source. <i>Physics in Medicine and Biology</i> , 2015 , 60, 175-93	3.8	5
40	Fluence inhomogeneities due to a ripple filter induced Moiré effect. <i>Physics in Medicine and Biology</i> , 2015 , 60, N59-69	3.8	7
39	A TLD-based ten channel system for the spectrometry of bremsstrahlung generated by laser-matter interaction. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2015 , 782, 69-76	1.2	6
38	Assessment of potential advantages of relevant ions for particle therapy: a model based study. <i>Medical Physics</i> , 2015 , 42, 1037-47	4.4	56
37	Design and evaluation of a Monte Carlo based model of an orthovoltage treatment system. <i>Zeitschrift Fur Medizinische Physik</i> , 2015 , 25, 341-352	7.6	2
36	Correction factors kE and kQ for LiF-TLDs for dosimetry in megavoltage electron and photon beams. <i>Zeitschrift Fur Medizinische Physik</i> , 2015 , 25, 186-91	7.6	1
35	The influence of neutron contamination on dosimetry in external photon beam radiotherapy. <i>Medical Physics</i> , 2015 , 42, 6529-36	4.4	9
34	GMctdospp: Description and validation of a CT dose calculation system. <i>Medical Physics</i> , 2015 , 42, 4260-704	4.4	5
33	Effect of ROI filtering in 3D cone-beam rotational angiography on organ dose and effective dose in cerebral investigations. <i>Journal of Applied Clinical Medical Physics</i> , 2015 , 16, 5306	2.3	1
32	Optimization of the stopping-power-ratio to Hounsfield-value calibration curve in proton and heavy ion therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2015 , 25, 251-63	7.6	7

31	Implementation of an Efficient Monte Carlo Algorithm in TRiP: Physical Dose Calculation. <i>International Journal of Particle Therapy</i> , 2015 , 2, 415-425	1.5	2
30	SU-E-T-350: Effective Point of Measurement and Total Perturbation Correction P for Parallel-Plate Ion Chambers in High-Energy Photon Beams. <i>Medical Physics</i> , 2015 , 42, 3414-3414	4.4	
29	Monte Carlo study of the depth-dependent fluence perturbation in parallel-plate ionization chambers in electron beams. <i>Medical Physics</i> , 2014 , 41, 111707	4.4	6
28	Making the right software choice for clinically used equipment in radiation oncology. <i>Radiation Oncology</i> , 2014 , 9, 145	4.2	3
27	Protection of quality and innovation in radiation oncology: the prospective multicenter trial the German Society of Radiation Oncology (DEGRO-QUIRO study). Evaluation of time, attendance of medical staff, and resources during radiotherapy with IMRT. <i>Strahlentherapie Und Onkologie</i> , 2014 , 190, 433-43	4.3	28
26	Effective point of measurement for parallel plate and cylindrical ion chambers in megavoltage electron beams. <i>Zeitschrift Fur Medizinische Physik</i> , 2014 , 24, 216-23	7.6	5
25	Fast optimization and dose calculation in scanned ion beam therapy. <i>Medical Physics</i> , 2014 , 41, 071703	4.4	6
24	Correction factors for source strength determination in HDR brachytherapy using the in-phantom method. <i>Zeitschrift Fur Medizinische Physik</i> , 2014 , 24, 138-52	7.6	3
23	Target volume coverage and dose to organs at risk in prostate cancer patients. Dose calculation on daily cone-beam CT data sets. <i>Strahlentherapie Und Onkologie</i> , 2014 , 190, 310-6	4.3	13
22	Monte Carlo calculated correction factors for diodes and ion chambers in small photon fields. <i>Physics in Medicine and Biology</i> , 2013 , 58, 2431-44	3.8	74
21	Physical and biological factors determining the effective proton range. <i>Medical Physics</i> , 2013 , 40, 111716	4.4	41
20	Difference in the relative response of the alanine dosimeter to megavoltage x-ray and electron beams. <i>Physics in Medicine and Biology</i> , 2013 , 58, 3259-82	3.8	23
19	Robustness against interfraction prostate movement in scanned ion beam radiation therapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012 , 84, e257-62	4	10
18	Impact of enhancements in the local effect model (LEM) on the predicted RBE-weighted target dose distribution in carbon ion therapy. <i>Physics in Medicine and Biology</i> , 2012 , 57, 7261-74	3.8	69
17	The impact of direct aperture optimization on plan quality and efficiency in complex head and neck IMRT. <i>Radiation Oncology</i> , 2012 , 7, 7	4.2	7
16	Evaluation and quantification of spectral information in tissue by confocal microscopy. <i>Journal of Biomedical Optics</i> , 2012 , 17, 106011	3.5	8
15	The influence of linac spot size on scatter factors. <i>Metrologia</i> , 2012 , 49, S215-S218	2.1	8
14	Beam quality corrections for parallel-plate ion chambers in electron reference dosimetry. <i>Physics in Medicine and Biology</i> , 2012 , 57, 1831-54	3.8	28

13	On the wall perturbation correction for a parallel-plate NACP-02 chamber in clinical electron beams. <i>Medical Physics</i> , 2011 , 38, 1045-54	4.4	13
12	Verification of a commercial implementation of the Macro-Monte-Carlo electron dose calculation algorithm using the virtual accelerator approach. <i>Zeitschrift Fur Medizinische Physik</i> , 2010 , 20, 51-60	7.6	9
11	Reduction of uterus dose in clinical thoracic computed tomography. <i>RoFo Fortschritte Auf Dem Gebiet Der Rontgenstrahlen Und Der Bildgebenden Verfahren</i> , 2010 , 182, 1091-6	2.3	5
10	Investigation of systematic uncertainties in Monte Carlo-calculated beam quality correction factors. <i>Physics in Medicine and Biology</i> , 2010 , 55, 4481-93	3.8	50
9	Investigation of correction factors for non-reference conditions in ion chamber photon dosimetry with Monte-Carlo simulations. <i>Zeitschrift Fur Medizinische Physik</i> , 2010 , 20, 25-33	7.6	7
8	Comment on "Monte Carlo simulation of an x-ray volume imaging cone beam CT unit" [Med. Phys. 36, 127-136 (2009)]. <i>Medical Physics</i> , 2009 , 36, 1039; author reply 1040	4.4	1
7	Silicon diodes as an alternative to diamond detectors for depth dose curves and profile measurements of photon and electron radiation. <i>Strahlentherapie Und Onkologie</i> , 2009 , 185, 530-6	4.3	9
6	Positioning of a plane-parallel ionization chamber in clinical electron beams and the impact on perturbation factors. <i>Physics in Medicine and Biology</i> , 2009 , 54, 2421-35	3.8	20
5	Monte Carlo calculations of beam quality correction factors kQ for electron dosimetry with a parallel-plate Roos chamber. <i>Physics in Medicine and Biology</i> , 2008 , 53, 1595-607	3.8	32
4	Thimble ionization chambers in medium-energy x-ray beams and the role of constructive details of the central electrode: Monte Carlo simulations and measurements. <i>Physics in Medicine and Biology</i> , 2008 , 53, 4893-906	3.8	20
3	Monte-Carlo-based perturbation and beam quality correction factors for thimble ionization chambers in high-energy photon beams. <i>Physics in Medicine and Biology</i> , 2008 , 53, 2823-36	3.8	84
2	Efficiency improvements for ion chamber calculations in high energy photon beams. <i>Medical Physics</i> , 2008 , 35, 1328-36	4.4	151
1	Investigation of the Mn ²⁺ → Mn ³⁺ energy transfer using time-resolved ODMR. <i>Journal of Crystal Growth</i> , 1990 , 101, 484-487	1.6	