

# Zdenka Kuncic

## 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.

129  
papers

2,205  
citations

25  
h-index

38  
g-index

141  
ext. papers

2,642  
ext. citations

4  
avg, IF

5.27  
L-index

#	Paper	IF	Citations
129	Particle detection and tracking with DNA. <i>European Physical Journal C</i> , <b>2022</b> , 82, 1	4.2	0
128	MNIST classification using Neuromorphic Nanowire Networks <b>2021</b> ,		3
127	Avalanches and edge-of-chaos learning in neuromorphic nanowire networks. <i>Nature Communications</i> , <b>2021</b> , 12, 4008	17.4	22
126	Information dynamics in neuromorphic nanowire networks. <i>Scientific Reports</i> , <b>2021</b> , 11, 13047	4.9	9
125	Neuromorphic nanowire networks: principles, progress and future prospects for neuro-inspired information processing. <i>Advances in Physics: X</i> , <b>2021</b> , 6, 1894234	5.1	5
124	Quantum Dot Nanomedicine Formulations Dramatically Improve Pharmacological Properties and Alter Uptake Pathways of Metformin and Nicotinamide Mononucleotide in Aging Mice. <i>ACS Nano</i> , <b>2021</b> , 15, 4710-4727	16.7	3
123	Modularity and multitasking in neuro-memristive reservoir networks. <i>Neuromorphic Computing and Engineering</i> , <b>2021</b> , 1, 014003		3
122	Study of Multi-Pixel Scintillator Detector Configurations for Measuring Polarized Gamma Radiation. <i>Condensed Matter</i> , <b>2021</b> , 6, 43	1.8	1
121	Roadmap for metal nanoparticles in radiation therapy: current status, translational challenges, and future directions. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 21RM02	3.8	45
120	Clustering effects in nanoparticle-enhanced emitting internal radionuclide therapy: a Monte Carlo study. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 125007	3.8	0
119	Topological Properties of Neuromorphic Nanowire Networks. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 184	5.1	18
118	A Radio-Nano-Platform for T1/T2 Dual-Mode PET-MR Imaging. <i>International Journal of Nanomedicine</i> , <b>2020</b> , 15, 1253-1266	7.3	6
117	Rapid Intestinal Uptake and Targeted Delivery to the Liver Endothelium Using Orally Administered Silver Sulfide Quantum Dots. <i>ACS Nano</i> , <b>2020</b> , 14, 1492-1507	16.7	15
116	A Chelate-Free Nano-Platform for Incorporation of Diagnostic and Therapeutic Isotopes. <i>International Journal of Nanomedicine</i> , <b>2020</b> , 15, 31-47	7.3	7
115	Harnessing adaptive dynamics in neuro-memristive nanowire networks for transfer learning <b>2020</b> ,		6
114	Neuromorphic Information Processing with Nanowire Networks <b>2020</b> ,		7
113	Reservoir Computing with Neuromemristive Nanowire Networks <b>2020</b> ,		8

112	High-sensitivity in vivo contrast for ultra-low field magnetic resonance imaging using superparamagnetic iron oxide nanoparticles. <i>Science Advances</i> , <b>2020</b> , 6, eabb0998	14.3	21
111	Dynamic Electrical Pathway Tuning in Neuromorphic Nanowire Networks. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2003679	15.6	14
110	Positron annihilation localization by nanoscale magnetization. <i>Scientific Reports</i> , <b>2020</b> , 10, 20262	4.9	2
109	Radio-enhancement effects by radiolabeled nanoparticles. <i>Scientific Reports</i> , <b>2019</b> , 9, 14346	4.9	15
108	Technical Note: The first live treatment on a 1.0 Tesla inline MRI-linac. <i>Medical Physics</i> , <b>2019</b> , 46, 3254-3258	4.8	9
107	Radio-enhancement by gold nanoparticles and their impact on water radiolysis for x-ray, proton and carbon-ion beams. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 175005	3.8	15
106	Emergent dynamics of neuromorphic nanowire networks. <i>Scientific Reports</i> , <b>2019</b> , 9, 14920	4.9	39
105	IMPACT OF NANOPARTICLE CLUSTERING ON DOSE RADIO-ENHANCEMENT. <i>Radiation Protection Dosimetry</i> , <b>2019</b> , 183, 50-54	0.9	7
104	A New Standard DNA Damage (SDD) Data Format. <i>Radiation Research</i> , <b>2019</b> , 191, 76-92	3.1	32
103	A high DQE water-equivalent EPID employing an array of plastic-scintillating fibers for simultaneous imaging and dosimetry in radiotherapy. <i>Medical Physics</i> , <b>2018</b> , 45, 2154-2168	4.4	4
102	The transcriptional response to oxidative stress is part of, but not sufficient for, insulin resistance in adipocytes. <i>Scientific Reports</i> , <b>2018</b> , 8, 1774	4.9	9
101	A data-driven, knowledge-based approach to biomarker discovery: application to circulating microRNA markers of colorectal cancer prognosis. <i>Npj Systems Biology and Applications</i> , <b>2018</b> , 4, 20	5	33
100	Nanoparticle radio-enhancement: principles, progress and application to cancer treatment. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 02TR01	3.8	108
99	Emergent brain-like complexity from nanowire atomic switch networks: Towards neuromorphic synthetic intelligence <b>2018</b> ,		6
98	Comparison of radiobiological parameters for Y radionuclide therapy (RNT) and external beam radiotherapy (EBRT) in vitro. <i>EJNMMI Physics</i> , <b>2018</b> , 5, 18	4.4	16
97	Impact of fluorescence emission from gold atoms on surrounding biological tissue-implications for nanoparticle radio-enhancement. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 3097-3110	3.8	10
96	Computational study of the activity, dynamics, energetics and conformations of insulin analogues using molecular dynamics simulations: Application to hyperinsulinemia and the critical residue B26. <i>Biochemistry and Biophysics Reports</i> , <b>2017</b> , 11, 182-190	2.2	0
95	Toward Personalized Dosimetry with P Microparticle Therapy for Advanced Pancreatic Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2017</b> , 99, 1029-1038	4	7

94	In silico investigation of factors affecting the MV imaging performance of a novel water-equivalent EPID. <i>Physica Medica</i> , <b>2016</b> , 32, 1819-1826	2.7	4
93	Advances in Computational Radiation Biophysics for Cancer Therapy: Simulating Nano-Scale Damage by Low-Energy Electrons <b>2016</b> , 43-54		
92	Unraveling the mechanistic complexity of Alzheimer's disease through systems biology. <i>Alzheimer's and Dementia</i> , <b>2016</b> , 12, 708-18	1.2	17
91	Unraveling Kinase Activation Dynamics Using Kinase-Substrate Relationships from Temporal Large-Scale Phosphoproteomics Studies. <i>PLoS ONE</i> , <b>2016</b> , 11, e0157763	3.7	9
90	ORTI: An Open-Access Repository of Transcriptional Interactions for Interrogating Mammalian Gene Expression Data. <i>PLoS ONE</i> , <b>2016</b> , 11, e0164535	3.7	12
89	Elucidating the Activation Mechanism of the Insulin-Family Proteins with Molecular Dynamics Simulations. <i>PLoS ONE</i> , <b>2016</b> , 11, e0161459	3.7	3
88	Correction for human head motion in helical x-ray CT. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 1416-38	3.8	10
87	Polarisation-based coincidence event discrimination: an in silico study towards a feasible scheme for Compton-PET. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 5803-17	3.8	8
86	Dose enhancement effects to the nucleus and mitochondria from gold nanoparticles in the cytosol. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 5993-6010	3.8	36
85	Improving thoracic four-dimensional cone-beam CT reconstruction with anatomical-adaptive image regularization (AAIR). <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 841-68	3.8	9
84	Advances in Computational Radiation Biophysics for Cancer Therapy: Simulating Nano-Scale Damage by Low-Energy Electrons. <i>Biophysical Reviews and Letters</i> , <b>2015</b> , 10, 25-36	1.2	6
83	A generalised enzyme kinetic model for predicting the behaviour of complex biochemical systems. <i>FEBS Open Bio</i> , <b>2015</b> , 5, 226-39	2.7	9
82	Issues involved in the quantitative 3D imaging of proton doses using optical CT and chemical dosimeters. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 709-26	3.8	13
81	The cytoplasm as a radiation target: an in silico study of microbeam cell irradiation. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 2325-37	3.8	8
80	Stochastic simulation of radium-223 dichloride therapy at the sub-cellular level. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 6087-96	3.8	9
79	Markerless tumor tracking using short kilovoltage imaging arcs for lung image-guided radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 9437-54	3.8	20
78	A rigid motion correction method for helical computed tomography (CT). <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 2047-73	3.8	33
77	Molecular Dynamics Simulations of Insulin: Elucidating the Conformational Changes that Enable Its Binding. <i>PLoS ONE</i> , <b>2015</b> , 10, e0144058	3.7	14

76	Advances in kilovoltage x-ray beam dosimetry. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, R183-231	3.8	104
75	Simulation of real-time EPID images during IMRT using Monte-Carlo. <i>Physica Medica</i> , <b>2014</b> , 30, 326-30	2.7	2
74	Image quality in thoracic 4D cone-beam CT: a sensitivity analysis of respiratory signal, binning method, reconstruction algorithm, and projection angular spacing. <i>Medical Physics</i> , <b>2014</b> , 41, 041912	4.4	31
73	Optimisation of the imaging and dosimetric characteristics of an electronic portal imaging device employing plastic scintillating fibres using Monte Carlo simulations. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 6827-40	3.8	5
72	Water equivalence of NIPAM based polymer gel dosimeters with enhanced sensitivity for x-ray CT. <i>Radiation Physics and Chemistry</i> , <b>2013</b> , 91, 60-69	2.5	9
71	Predicted ionisation in mitochondria and observed acute changes in the mitochondrial transcriptome after gamma irradiation: a Monte Carlo simulation and quantitative PCR study. <i>Mitochondrion</i> , <b>2013</b> , 13, 736-42	4.9	21
70	The feasibility of head motion tracking in helical CT: a step toward motion correction. <i>Medical Physics</i> , <b>2013</b> , 40, 041903	4.4	10
69	Positron emission tomography coincidence detection with photon polarization correlation <b>2013</b> ,		2
68	Estimation of effective imaging dose for kilovoltage intratreatment monitoring of the prostate position during cancer radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 5983-96	3.8	13
67	Characterization of a novel EPID designed for simultaneous imaging and dose verification in radiotherapy. <i>Medical Physics</i> , <b>2013</b> , 40, 091902	4.4	17
66	Characterization of optical transport effects on EPID dosimetry using Geant4. <i>Medical Physics</i> , <b>2013</b> , 40, 041708	4.4	18
65	A system for EPID-based real-time treatment delivery verification during dynamic IMRT treatment. <i>Medical Physics</i> , <b>2013</b> , 40, 091907	4.4	32
64	Kilovoltage intrafraction monitoring for prostate intensity modulated arc therapy: first clinical results. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2012</b> , 84, e655-61	4	79
63	Practical considerations for reporting surface dose in external beam radiotherapy: a 6 MV X-ray beam study. <i>Australasian Physical and Engineering Sciences in Medicine</i> , <b>2012</b> , 35, 271-82	1.9	14
62	An evaluation of calculation parameters in the EGSnrc/BEAMnrc Monte Carlo codes and their effect on surface dose calculation. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, N267-78	3.8	12
61	Water and tissue equivalence of a new PRESAGE(□) formulation for 3D proton beam dosimetry: a Monte Carlo study. <i>Medical Physics</i> , <b>2012</b> , 39, 7071-9	4.4	28
60	Water equivalence evaluation of PRESAGE(□) formulations for megavoltage electron beams: a Monte Carlo study. <i>Australasian Physical and Engineering Sciences in Medicine</i> , <b>2012</b> , 35, 455-63	1.9	4
59	Nanoparticles in Cancer Imaging and Therapy. <i>Journal of Nanomaterials</i> , <b>2012</b> , 2012, 1-7	3.2	33

58	Characterization of a Novel Diamond-Based Microdosimeter Prototype for Radioprotection Applications in Space Environments. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 3110-3116	1.7	13
57	In silico nanodosimetry: new insights into nontargeted biological responses to radiation. <i>Computational and Mathematical Methods in Medicine</i> , <b>2012</b> , 2012, 147252	2.8	15
56	A study of surface dosimetry for breast cancer radiotherapy treatments using Gafchromic EBT2 film. <i>Journal of Applied Clinical Medical Physics</i> , <b>2012</b> , 13, 3727	2.3	34
55	Radiological characterization and water equivalency of genipin gel for x-ray and electron beam dosimetry. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 4685-99	3.8	28
54	Investigation of radiological properties and water equivalency of PRESAGE dosimeters. <i>Medical Physics</i> , <b>2011</b> , 38, 2265-74	4.4	77
53	A method of motion tracking during CT for motion correction <b>2011</b> ,		1
52	Direct dose to water dosimetry for pretreatment IMRT verification using a modified EPID. <i>Medical Physics</i> , <b>2011</b> , 38, 6257-64	4.4	12
51	Radio and X-ray emission from disc winds in radio-quiet quasars. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2011</b> , 413, 1735-1743	4.3	10
50	Polarization enhanced X-ray imaging for biomedicine. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2011</b> , 648, S208-S210	1.2	8
49	Plasma nanofabrication and nanomaterials safety. <i>Journal Physics D: Applied Physics</i> , <b>2011</b> , 44, 174019	3	19
48	The measurement of backscatter factors of kilovoltage X-ray beams using Gafchromic EBT2 film. <i>Australasian Physical and Engineering Sciences in Medicine</i> , <b>2011</b> , 34, 261-6	1.9	13
47	The water equivalence of solid phantoms for low energy photon beams. <i>Medical Physics</i> , <b>2010</b> , 37, 4355-4364	4.4	78
46	Water equivalency evaluation of PRESAGE dosimeters for dosimetry of Cs-137 and Ir-192 brachytherapy sources. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 250, 012093	0.3	8
45	An investigation of backscatter factors for kilovoltage x-rays: a comparison between Monte Carlo simulations and Gafchromic EBT film measurements. <i>Physics in Medicine and Biology</i> , <b>2010</b> , 55, 783-97	3.8	32
44	Study of dosimetric water equivalency of PRESAGE dosimeters for megavoltage and kilovoltage x-ray beams. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 250, 012053	0.3	9
43	An evaluation of Genipin gel as a water equivalent dosimeter for megavoltage electron beams and kilovoltage x-ray beams. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 250, 012036	0.3	4
42	THEXMM-NEWTON LONG LOOK OF NGC 1365: LACK OF A HIGH/SOFT STATE IN ITS ULTRALUMINOUS X-RAY SOURCES. <i>Astrophysical Journal</i> , <b>2009</b> , 695, 1614-1622	4.7	25
41	Enhanced MHD Transport in Astrophysical Accretion Flows: Turbulence, Winds and Jets. <i>Plasma and Fusion Research</i> , <b>2009</b> , 4, 017-017	0.5	2

40	X-ray polarization in relativistic jets. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2009</b> , 395, 1507-1514	4.3	37
39	Accretion discs in blazars. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2009</b> , 400, 1521-1526	4.3	17
38	Terrestrial foreshock Langmuir waves: STEREO observations, theoretical modeling, and quasi-linear simulations. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		9
37	EPID dosimetry: effect of different layers of materials on absorbed dose response. <i>Medical Physics</i> , <b>2009</b> , 36, 5665-74	4.4	19
36	Compton scattering of Fe K $\alpha$ lines in magnetic cataclysmic variables. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2008</b> , 383, 962-970	4.3	6
35	Jet-enhanced accretion growth of supermassive black holes. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2008</b> , 386, 989-994	4.3	22
34	X-ray polarization signatures of Compton scattering in magnetic cataclysmic variables. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2008</b> , 386, 2167-2172	4.3	11
33	New global 3D MHD simulations of black hole disk accretion and outflows. <i>Proceedings of the International Astronomical Union</i> , <b>2008</b> , 4, 129-130	0.1	2
32	Ionization Cone in the X-Ray Binary LMC X-1. <i>Astrophysical Journal</i> , <b>2008</b> , 687, L29-L32	4.7	11
31	Black hole mass estimates from soft X-ray spectra. <i>Advances in Space Research</i> , <b>2008</b> , 42, 517-522	2.4	3
30	Constraints on Jet-driven Disk Accretion in Sagittarius A*. <i>Astrophysical Journal</i> , <b>2008</b> , 676, 351-360	4.7	6
29	Effects of overshoots on electron distributions upstream and downstream of quasi-perpendicular collisionless shocks. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		6
28	Towards a new standard model for black hole accretion. <i>Astrophysics and Space Science</i> , <b>2007</b> , 311, 127-135	1.6	18
27	Jet-driven disk accretion in low luminosity AGN?. <i>Astrophysics and Space Science</i> , <b>2007</b> , 310, 327-332	1.6	7
26	TOWARDS A NEW STANDARD THEORY FOR ASTROPHYSICAL DISK ACCRETION. <i>Modern Physics Letters A</i> , <b>2007</b> , 22, 1685-1700	1.3	11
25	Spectacular Trailing Streamers near LMC X-1: The First Evidence of a Jet?. <i>Astrophysical Journal</i> , <b>2007</b> , 667, L163-L166	4.7	11
24	On the Origin of Radio Core Emission in Radio-quiet Quasars. <i>Astrophysical Journal</i> , <b>2007</b> , 668, L103-L106	4.7	48
23	Ultra-luminous X-ray sources: X-ray binaries in a high/hard state?. <i>Proceedings of the International Astronomical Union</i> , <b>2006</b> , 2, 247-250	0.1	1



22	Chilled disks in ultraluminous X-ray sources. <i>Proceedings of the International Astronomical Union</i> , <b>2006</b> , 2, 453-454	0.1	
21	Multiband study of NGC 7424 and its two newly discovered ultraluminous X-ray sources. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2006</b> , 370, 1666-1676	4.3	16
20	Radio and X-ray properties of relativistic beaming models for ultraluminous X-ray sources. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2006</b> , 372, 630-638	4.3	25
19	Planetary foreshock radio emissions. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		6
18	Compton Scattering of Fe K $\alpha$ Lines from Accreting White Dwarfs. <i>Publications of the Astronomical Society of Australia</i> , <b>2005</b> , 22, 56-61	5.5	4
17	Black Holes in Galactic Nuclei, X-Ray Binaries and Ultraluminous X-Ray Sources. <i>Publications of the Astronomical Society of Australia</i> , <b>2005</b> , 22, 195-198	5.5	1
16	A Quantitative model for terrestrial foreshock radio emissions: 1. Predicted properties. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		13
15	Radio emission from mini-magnetospheres on the Moon. <i>Geophysical Research Letters</i> , <b>2004</b> , 31, n/a-n/a	4.9	5
14	Radio Emission from Ultrashort-Period Double Degenerate Binaries. <i>Publications of the Astronomical Society of Australia</i> , <b>2004</b> , 21, 248-251	5.5	3
13	Dynamics and Energetics of Turbulent, Magnetized Disk Accretion around Black Holes: A First-Principles Approach to Disk-Corona-Outflow Coupling. <i>Astrophysical Journal</i> , <b>2004</b> , 616, 669-687	4.7	61
12	Submillimeter Observations of a Sample of Broad Absorption Line Quasars. <i>Astrophysical Journal</i> , <b>2003</b> , 596, L35-L38	4.7	19
11	Type II Solar Radio Bursts: Theory and Space Weather Implications. <i>Space Science Reviews</i> , <b>2003</b> , 107, 27-34	7.5	59
10	Theoretically predicted properties of type II radio emission from an interplanetary foreshock. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		51
9	Analytic model for the electrostatic potential jump across collisionless shocks, with application to Earth's bow shock. <i>Journal of Geophysical Research</i> , <b>2002</b> , 107, SSH 11-1-SSH 11-10		16
8	Broad Absorption Line Quasars and the Radio-Loud/Radio-Quiet Dichotomy. <i>Publications of the Astronomical Society of the Pacific</i> , <b>1999</b> , 111, 954-963	5	13
7	Magnetic Fields in Accretion Disks*. <i>Publications of the Astronomical Society of Australia</i> , <b>1999</b> , 16, 225-233	3.5	8
6	Thermal material in relativistic jets. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>1998</b> , 293, 288-298	4.3	27
5	Induced Compton Scattering in Gigahertz Peak Spectrum Radio Sources. <i>Astrophysical Journal</i> , <b>1998</b> , 495, L35-L38	4.7	19



4	Dense, thin clouds and reprocessed radiation in the central regions of active galactic nuclei. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>1997</b> , 284, 717-730	4.3	32
3	Physical constraints on the sizes of dense clouds in the central magnetospheres of active galactic nuclei. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>1996</b> , 283, 1322-1330	4.3	19
2	Propagation and absorption of cyclotron maser radiation in solar microwave spike bursts. <i>Solar Physics</i> , <b>1993</b> , 145, 317-338	2.6	4
1	Nanoscale Neuromorphic Networks and Criticality: A Perspective. <i>Journal of Physics Complexity</i> ,	1.8	3