

Bruno Golosio

List of Publications by Year in descending order

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97
papers

2,172
citations

218677

26
h-index

243625

44
g-index

99
all docs

99
docs citations

99
times ranked

2023
citing authors

#	ARTICLE	IF	CITATIONS
1	The xraylib library for X-ray matter interactions. Recent developments. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 776-784.	2.9	310
2	Internal elemental microanalysis combining x-ray fluorescence, Compton and transmission tomography. Journal of Applied Physics, 2003, 94, 145-156.	2.5	142
3	A library for X-ray matter interaction cross sections for X-ray fluorescence applications. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1725-1731.	2.9	128
4	A CAD system for nodule detection in low-dose lung CTs based on region growing and a new active contour model. Medical Physics, 2007, 34, 4901-4910.	3.0	91
5	Towards breast tomography with synchrotron radiation at Elettra: first images. Physics in Medicine and Biology, 2016, 61, 1634-1649.	3.0	74
6	A novel multithreshold method for nodule detection in lung CT. Medical Physics, 2009, 36, 3607-3618.	3.0	73
7	Monte Carlo simulation of X-ray imaging and spectroscopy experiments using quadric geometry and variance reduction techniques. Computer Physics Communications, 2014, 185, 1044-1052.	7.5	65
8	Nondestructive three-dimensional elemental microanalysis by combined helical x-ray microtomographies. Applied Physics Letters, 2004, 84, 2199-2201.	3.3	54
9	Voxel-based Monte Carlo simulation of X-ray imaging and spectroscopy experiments. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1747-1754.	2.9	53
10	Imaging performance of phase-contrast breast computed tomography with synchrotron radiation and a CdTe photon-counting detector. Physica Medica, 2016, 32, 681-690.	0.7	51
11	Advancements towards the implementation of clinical phase-contrast breast computed tomography at Elettra. Journal of Synchrotron Radiation, 2019, 26, 1343-1353.	2.4	47
12	Phase-contrast breast CT: the effect of propagation distance. Physics in Medicine and Biology, 2018, 63, 24NT03.	3.0	42
13	Quantitative evaluation of single-shot inline phase contrast imaging using an inverse Compton x-ray source. Applied Physics Letters, 2010, 97, .	3.3	40
14	Pleural nodule identification in low-dose and thin-slice lung computed tomography. Computers in Biology and Medicine, 2009, 39, 1137-1144.	7.0	36
15	The SPARC_LAB Thomson source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 237-242.	1.6	36
16	An improved Marching Cube algorithm for 3D data segmentation. Computer Physics Communications, 2013, 184, 777-782.	7.5	34
17	Large-area single-photon-counting CdTe detector for synchrotron radiation computed tomography: a dedicated pre-processing procedure. Journal of Synchrotron Radiation, 2018, 25, 1068-1077.	2.4	33
18	Software for X-ray fluorescence and scattering tomographic reconstruction. Computer Physics Communications, 2001, 141, 412-425.	7.5	31

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19	Cork quality estimation by using Compton tomography. Nuclear Instruments & Methods in Physics Research B, 2002, 196, 161-168.	1.4	31
20	X-ray Fluorescence Tomography of Individual Municipal Solid Waste and Biomass Fly Ash Particles. Analytical Chemistry, 2004, 76, 1586-1595.	6.5	31
21	Comparison of two portable solid state detectors with an improved collimation and alignment device for mammographic x-ray spectroscopy. Medical Physics, 2006, 33, 3469-3477.	3.0	30
22	Start-to-end simulation of a Thomson source for mammography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 615, 93-99.	1.6	30
23	The FIRST experiment at GSI. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 678, 130-138.	1.6	30
24	Quantitative characterization of breast tissues with dedicated CT imaging. Physics in Medicine and Biology, 2019, 64, 155011.	3.0	30
25	Direct analysis of molybdenum target generated x-ray spectra with a portable device. Medical Physics, 2004, 31, 2763-2770.	3.0	28
26	Sleep-like slow oscillations improve visual classification through synaptic homeostasis and memory association in a thalamo-cortical model. Scientific Reports, 2019, 9, 8990.	3.3	28
27	Use of Monte Carlo simulations for cultural heritage X-ray fluorescence analysis. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2015, 108, 15-20.	2.9	27
28	Fast Simulations of Highly-Connected Spiking Cortical Models Using GPUs. Frontiers in Computational Neuroscience, 2021, 15, 627620.	2.1	27
29	Distributed medical images analysis on a Grid infrastructure. Future Generation Computer Systems, 2007, 23, 475-484.	7.5	25
30	A new Monte Carlo code for simulation of the effect of irregular surfaces on X-ray spectra. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 94-95, 58-62.	2.9	24
31	Imaging study of a phase-sensitive breast-CT system in continuous acquisition mode. Journal of Instrumentation, 2017, 12, C01016-C01016.	1.2	24
32	Measurement of an inverse Compton scattering source local spectrum using k-edge filters. Applied Physics Letters, 2012, 100, .	3.3	23
33	Optimization of the equalization procedure for a single-photon counting CdTe detector used for CT. Journal of Instrumentation, 2017, 12, C11014-C11014.	1.2	23
34	Monochromatic breast computed tomography with synchrotron radiation: phase-contrast and phase-retrieved image comparison and full-volume reconstruction. Journal of Medical Imaging, 2018, 6, 1.	1.5	23
35	A Cognitive Neural Architecture Able to Learn and Communicate through Natural Language. PLoS ONE, 2015, 10, e0140866.	2.5	22
36	CMOS APS detector characterization for quantitative X-ray imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 703, 26-32.	1.6	21

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37	Measurement of fragmentation cross sections of C ¹² ions on a thin gold target with the FIRST apparatus. <i>Physical Review C</i> , 2016, 93, .	2.9	20
38	Algorithmic techniques for quantitative Compton tomography. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2004, 213, 108-111.	1.4	18
39	The xraylib library for x-ray-matter interaction cross sections: new developments and applications. , 2011, , .		18
40	A simple scanner for Compton tomography. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002, 487, 188-192.	1.6	16
41	Phase contrast imaging simulation and measurements using polychromatic sources with small source-object distances. <i>Journal of Applied Physics</i> , 2008, 104, 093102.	2.5	15
42	Compact x-ray sources for mammographic applications: Monte Carlo simulations of image quality. <i>Medical Physics</i> , 2009, 36, 5149-5161.	3.0	15
43	A high-quality multilayer structure characterization method based on X-ray fluorescence and Monte Carlo simulation. <i>Applied Physics A: Materials Science and Processing</i> , 2015, 118, 497-504.	2.3	15
44	Performance of upstream interaction region detectors for the FIRST experiment at GSI. <i>Journal of Instrumentation</i> , 2012, 7, P02006-P02006.	1.2	14
45	Visibility of tumor-like details in inline phase contrast mammography using quasimonochromatic X-ray sources. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 608, S66-S69.	1.6	13
46	A two-layered classifier based on the radial basis function for the screening of thalassaemia. <i>Computers in Biology and Medicine</i> , 2013, 43, 1724-1731.	7.0	13
47	Performance of the reconstruction algorithms of the FIRST experiment pixel sensors vertex detector. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 767, 34-40.	1.6	13
48	Experimental optimization of the energy for breast-CT with synchrotron radiation. <i>Scientific Reports</i> , 2020, 10, 17430.	3.3	13
49	A Simulator for X-ray images. <i>Radiation Protection Dosimetry</i> , 2005, 114, 350-354.	0.8	12
50	Search of microcalcification clusters with the CALMA CAD station. , 2002, , .		10
51	3D imaging of vapour and liquid inclusions from the Mole Granite, Australia, using helical fluorescence tomography. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2007, 62, 799-806.	2.9	10
52	FIRST experiment: Fragmentation of Ions Relevant for Space and Therapy. <i>Journal of Physics: Conference Series</i> , 2013, 420, 012061.	0.4	9
53	Virtual Clinical Trials in 2D and 3D X-ray Breast Imaging and Dosimetry: Comparison of CPU-Based and GPU-Based Monte Carlo Codes. <i>Cancers</i> , 2022, 14, 1027.	3.7	9
54	Quantitative phase retrieval with picosecond X-ray pulses from the ATF Inverse Compton Scattering source. <i>Optics Express</i> , 2011, 19, 2748.	3.4	8

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55	Thalamo-cortical spiking model of incremental learning combining perception, context and NREM-sleep. PLoS Computational Biology, 2021, 17, e1009045.	3.2	8
56	Elemental investigation on Spanish dinosaur bones by x-ray fluorescence. Physica Scripta, 2013, 88, 015802.	2.5	7
57	Fast Simulation of a Multi-Area Spiking Network Model of Macaque Cortex on an MPI-GPU Cluster. Frontiers in Neuroinformatics, 0, 16, .	2.5	7
58	Diagnostic performance of radiologists with and without different CAD systems for mammography. , 2003, 5034, 51.		6
59	Seven years of x-ray fluorescence computed microtomography. , 2004, , .		6
60	A Framework for Iterative Reconstruction in Phase-Contrast Computed Tomography Dedicated to the Breast. IEEE Transactions on Radiation and Plasma Medical Sciences, 2017, 1, 505-510.	3.7	5
61	Radiochromic film dosimetry in synchrotron radiation breast computed tomography: a phantom study. Journal of Synchrotron Radiation, 2020, 27, 762-771.	2.4	5
62	Optimization of a customized simultaneous algebraic reconstruction technique algorithm for phase-contrast breast computed tomography. Physics in Medicine and Biology, 2022, 67, 095012.	3.0	5
63	Fit of EDXRF spectra with a genetic algorithm. X-Ray Spectrometry, 2001, 30, 32-36.	1.4	4
64	Geometrical factor influence on Compton profile measurement for biological samples. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 526, 584-592.	1.6	4
65	X-ray tomography: how to evaluate the reconstruction quality?. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1755-1758.	2.9	4
66	Advantages of quasi-monochromatic X-ray sources in absorption mammography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 608, S106-S108.	1.6	4
67	2D Recurrent Neural Networks for Robust Visual Tracking of Non-Rigid Bodies. Communications in Computer and Information Science, 2016, , 18-34.	0.5	4
68	Modeling Multiple Language Learning in a Developmental Cognitive Architecture. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 922-933.	3.8	4
69	A correction procedure for the self-absorption artifacts in x-ray Compton tomography. X-Ray Spectrometry, 2002, 31, 377-382.	1.4	3
70	X-ray phase-contrast imaging with an Inverse Compton Scattering source. , 2010, , .		3
71	A Cognitive Neural Model of Executive Functions in Natural Language Processing. Procedia Computer Science, 2015, 71, 196-201.	2.0	3
72	2D recurrent neural networks: a high-performance tool for robust visual tracking in dynamic scenes. Neural Computing and Applications, 2018, 29, 329-341.	5.6	3

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73	Optimization of a customized Simultaneous Algebraic Reconstruction Technique algorithm for breast CT. , 2019, , .		3
74	Using Geant4 Monte Carlo toolkit to evaluate a low power X-ray tube generator configuration. Applied Radiation and Isotopes, 2021, 168, 109487.	1.5	3
75	A new algorithm for computer tomographic reconstruction from partial view projections. Medical Physics, 2001, 28, 462-468.	3.0	2
76	The FIRST experiment for nuclear fragmentation measurements at GSI. , 2011, , .		2
77	Preliminary study of an angiographic and angio-tomographic technique based on K-edge filters. Journal of Applied Physics, 2013, 114, .	2.5	2
78	New Techniques in Diagnostic X-ray Imaging: A Simulation Tool and Experimental Findings. Physics Procedia, 2015, 62, 3-10.	1.2	2
79	Quantitative evaluation of breast CT reconstruction by means of figures of merit based on similarity metrics. , 2017, , .		2
80	Monochromatic breast CT: absorption and phase-retrieved images. , 2018, , .		2
81	Lesion visibility in phase-contrast breast CT: comparison with histological images. , 2020, , .		2
82	A novel morphological approach to volume extraction in 3D tomography. Computer Physics Communications, 2001, 141, 217-224.	7.5	1
83	Dependence of image quality on energy spread for a Bragg diffraction based radiography system. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 580, 986-989.	1.6	1
84	Comparison of XRMC and Geant4 on dosimetry applied to mammography. , 2017, , .		1
85	Editorial: Language Representation and Learning in Cognitive and Artificial Intelligence Systems. Frontiers in Robotics and AI, 2020, 7, 69.	3.2	1
86	A CT-scanner for transmission, scattering, and fluorescent radiation imaging. , 2002, 4503, 310.		0
87	Analytical simulator for Compton tomographic measurements. , 2002, , .		0
88	Correction procedure for the self-absorption artifacts in x-ray Compton tomography. , 2002, 4503, 132.		0
89	Computer tomographic reconstruction from partial-view projections. , 2002, , .		0
90	The Site of In Dopants in Si. AIP Conference Proceedings, 2007, , .	0.4	0

#	ARTICLE	IF	CITATIONS
91	Lasers As Particle Accelerators In Medicine: From Laser-Driven Protons To Imaging With Thomson Sources. , 2011, , .		0
92	The KENTROS detector for identification and kinetic energy measurements of nuclear fragments at polar angles between 5 and 90 degrees. , 2012, , .		0
93	Experiment FIRST: Fragmentation of ^{12}C beam at 400 MeV/u. , 2013, , .		0
94	Abstract ID: 69 Validation of XPMC Monte Carlo toolkit for external dosimetry applied to mammography. Physica Medica, 2017, 42, 14.	0.7	0
95	[P194] Breast cancer radiosurgery with a synchrotron radiation beam. Physica Medica, 2018, 52, 156.	0.7	0
96	Monte Carlo's Core and Tests for Application Developers: Geant4 and XPMC Comparison and Validation. , 0, , .		0
97	SCANNING TOMOGRAPHY. , 2008, , 211-248.		0