

# Maria Jose Rodriguez-Alvarez

## List of Publications by Year in descending order

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82  
papers

713  
citations

687335

13  
h-index

610883

24  
g-index

83  
all docs

83  
docs citations

83  
times ranked

784  
citing authors

#	ARTICLE	IF	CITATIONS
1	MR Images, Brain Lesions, and Deep Learning. Applied Sciences (Switzerland), 2021, 11, 1675.	2.5	14
2	Simulation Study of a Frame-Based Motion Correction Algorithm for Positron Emission Imaging. Sensors, 2021, 21, 2608.	3.8	4
3	Fast filters for preprocessing and mass segmentation in mammography images. , 2021, , .		3
4	2-D Feasibility Study of Joint Reconstruction of Attenuation and Activity in Limited Angle TOF-PET. IEEE Transactions on Radiation and Plasma Medical Sciences, 2021, 5, 712-722.	3.7	2
5	Fast Energy Dependent Scatter Correction for List-Mode PET Data. Journal of Imaging, 2021, 7, 199.	3.0	4
6	Image Motion Correction of GATE Simulation in Dedicated PET Scanner with Open Geometry. Lecture Notes in Computer Science, 2021, , 3-12.	1.3	0
7	DenseNet for Breast Tumor Classification in Mammographic Images. Lecture Notes in Computer Science, 2021, , 166-176.	1.3	3
8	Deep-Learning-Based Computer-Aided Systems for Breast Cancer Imaging: A Critical Review. Applied Sciences (Switzerland), 2020, 10, 8298.	2.5	44
9	Simulation Study for Designing a Dedicated Cardiac TOF-PET System. Sensors, 2020, 20, 1311.	3.8	8
10	Biplanar breast PET: preliminary evaluation. , 2020, , .		1
11	TOF studies for dedicated PET with open geometries. Journal of Instrumentation, 2019, 14, C02006-C02006.	1.2	3
12	Motion Correction of Multi-Frame PET Data. , 2019, , .		1
13	Deep learning for MRI-based CT synthesis: a comparison of MRI sequences and neural network architectures. , 2019, , .		1
14	Identifying Demyelinating and Ischemia brain diseases through magnetic resonance images processing. , 2019, , .		2
15	PET scatter correction using machine learning techniques. , 2019, , .		2
16	High resolution and sensitivity gamma camera with active septa. A first Monte Carlo study. Scientific Reports, 2019, 9, 18431.	3.3	9
17	NEMA Performance Evaluation of CareMiBrain dedicated brain PET and Comparison with the whole-body and dedicated brain PET systems. Scientific Reports, 2019, 9, 15484.	3.3	34
18	Building blocks of a multi-layer PET with time sequence photon interaction discrimination and double Compton camera. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 895, 74-83.	1.6	7

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19	QR-Factorization Algorithm for Computed Tomography (CT): Comparison With FDK and Conjugate Gradient (CG) Algorithms. IEEE Transactions on Radiation and Plasma Medical Sciences, 2018, 2, 459-469.	3.7	6
20	Magnetic resonance brain images algorithm to identify demyelinating and ischemic diseases. , 2018, , .		1
21	Characterization of protons accelerated from a 3 TW table-top laser system. Journal of Instrumentation, 2017, 12, T05001-T05001.	1.2	7
22	From Virtual Pixel Grids to Overlapped PSF for PET Systems with Monolithic Crystals. , 2017, , .		0
23	A Direct Ray Tracing Reconstruction Algorithm Using an Adaptive Median Filter. , 2017, , .		0
24	Strategies of statistical windows in PET image reconstruction to improve the user's real time experience. Journal of Physics: Conference Series, 2017, 931, 012025.	0.4	0
25	Demyelinating and ischemic brain diseases: detection algorithm through regular magnetic resonance images. , 2017, , .		3
26	Preliminary characterization of ASIC-based detectors for TOF-PET applications. , 2016, , .		0
27	Noise rejection in monolithic PET detectors. , 2016, , .		1
28	Performance study of a PET scanner based on monolithic scintillators for different DOI-dependent methods. Journal of Instrumentation, 2016, 11, C12076-C12076.	1.2	6
29	A direct image reconstruction algorithm for PET scanners based on monolithic crystals. , 2016, , .		2
30	Performance evaluation of the mindview PET using GATE and STIR. , 2016, , .		1
31	Time-of-Flight detection of Al ions from laser produced plasma. , 2016, , .		0
32	Determination of the Interaction Position of Gamma Photons in Monolithic Scintillators Using Neural Network Fitting. IEEE Transactions on Nuclear Science, 2016, 63, 30-36.	2.0	19
33	Calibration and Performance Tests of Detectors for Laser-Accelerated Protons. IEEE Transactions on Nuclear Science, 2015, 62, 3216-3224.	2.0	12
34	A new method for image reconstruction in computed tomography (CT) using QR-Decomposition: Image quality assessment. , 2015, , .		2
35	Detailed requirements for a laser-based proton/ion accelerator for radioisotope production. , 2015, , .		2
36	Pixel size gradient detector for monolithic crystal PET systems. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
37	Analysis of the Statistical Moments of the Scintillation Light Distribution With dSiPMs. IEEE Transactions on Nuclear Science, 2015, 62, 1981-1988.	2.0	4
38	Detector block based on arrays of 144 SiPMs and monolithic scintillators: A performance study. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 787, 42-45.	1.6	9
39	Noise Analysis in Computed Tomography (CT) Image Reconstruction using QR-Decomposition Algorithm. IEEE Transactions on Nuclear Science, 2015, 62, 869-875.	2.0	8
40	Results of a combined monolithic crystal and an array of ASICs controlled SiPMs. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 734, 132-136.	1.6	16
41	Minimization of border effects in monolithic scintillators using neural networks, based on MR-compatible SiPM arrays. EJNMMI Physics, 2014, 1, A19.	2.7	2
42	Progress report on the MindView brain PET detector module based on large area SiPMs arrays. EJNMMI Physics, 2014, 1, A66.	2.7	1
43	3-D photon impact determination using fitting approaches to the Light Distribution. , 2014, , .		7
44	Parallelization of MLEM algorithm for PET reconstruction based on GPUs. , 2014, , .		0
45	Simulation Study of Resistor Networks Applied to an Array of 256 SiPMs. IEEE Transactions on Nuclear Science, 2013, 60, 592-598.	2.0	10
46	Minimization of Parallax Error in Dedicated Breast PET. IEEE Transactions on Nuclear Science, 2013, 60, 739-745.	2.0	7
47	Effect of noise in CT image reconstruction using QR-Decomposition algorithm. , 2013, , .		2
48	Expectation maximization (EM) algorithms using polar symmetries for computed tomography (CT) image reconstruction. Computers in Biology and Medicine, 2013, 43, 1053-1061.	7.0	9
49	Implementation and analysis of list mode algorithm using tubes of response on a dedicated brain and breast PET. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 702, 129-132.	1.6	18
50	Experimental evaluation of the impact of b-learning methodologies on engineering students in Spain. Computers in Human Behavior, 2013, 29, 370-377.	8.5	45
51	Monolithic crystals for PET devices: Optical coupling optimization. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 731, 288-294.	1.6	2
52	Design of the PET+MR system for head imaging of the DREAM Project. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 702, 94-97.	1.6	7
53	ALBIRA: A small animal PET/SPECT/CT imaging system. Medical Physics, 2013, 40, 051906.	3.0	81
54	Time reconstruction study using tubes of response backprojectors in list mode algorithms, applied to a monolithic crystals based breast PET. , 2013, , .		0

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55	Statistical moments of scintillation light distribution analysis with dSiPMs and monolithic crystals. , 2013, , .		1
56	Time-of-flight detector for the characterisation of laser-accelerated protons. , 2013, , .		1
57	Dosimetric calibration of radiochromic film for laser-accelerated proton beams. , 2013, , .		1
58	Performance evaluation of the dual ring MAMMI breast PET. , 2013, , .		1
59	Resources and features of robotics learning environments (RLEs) in Spain and Latin America. , 2013, , .		10
60	EM tomographic image reconstruction using polar voxels. Journal of Instrumentation, 2013, 8, C01004-C01004.	1.2	9
61	Advances in assessment methodologies for basic clinical and surgical skills in medical school. , 2013, , .		0
62	First results of an ASIC controlled &#x03B3;-detector based on a SiPM-array and a monolithic LYSO. , 2012, , .		6
63	Small animal PET scanner based on monolithic LYSO crystals: Performance evaluation. Medical Physics, 2012, 39, 643-653.	3.0	54
64	Exploiting symmetries for weight matrix design in CT imaging. Mathematical and Computer Modelling, 2011, 54, 1655-1664.	2.0	9
65	Sparse Givens resolution of large system of linear equations: Applications to image reconstruction. Mathematical and Computer Modelling, 2010, 52, 1258-1264.	2.0	4
66	New pixellation scheme for CT algebraic reconstruction to exploit matrix symmetries. Computers and Mathematics With Applications, 2008, 56, 715-726.	2.7	13
67	Performance tests of two portable mini gamma cameras for medical applications. Medical Physics, 2006, 33, 4210-4220.	3.0	59
68	Constructing eigenfunctions of non-selfadjoint coupled parabolic boundary problems. Mathematical and Computer Modelling, 2006, 43, 275-282.	2.0	0
69	Determination of IBIS mask transmission matrix. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 537, 571-580.	1.6	1
70	An algorithm to initialize the searchof solutions of polynomial systems. Computers and Mathematics With Applications, 2005, 50, 919-933.	2.7	1
71	Exact solution of variable coefficient mixed hyperbolic partial differential problems. Applied Mathematics Letters, 2003, 16, 309-312.	2.7	1
72	Solving Dirichlet's problem in a rectangle for separate variable coefficient elliptic equations. Applied Mathematics Letters, 2002, 15, 693-696.	2.7	1

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73	Modelling of U, Th, Ra and <sup>137</sup> Cs radionuclides behaviour in rivers. Comparison with field observations. Applied Mathematical Modelling, 2000, 25, 57-77.	4.2	0
74	The transfer of uranium from sediment to water along Jucar River, Spain. Journal of Radioanalytical and Nuclear Chemistry, 1999, 242, 297-307.	1.5	2
75	Effect of pH, temperature, conductivity and sediment size on thorium and radium activities along Jucar River (Spain). Journal of Radioanalytical and Nuclear Chemistry, 1999, 242, 671-681.	1.5	16
76	Background in low Earth orbits measured by LEGRI telescope " short and long term variability. Nuclear Instruments & Methods in Physics Research B, 1999, 155, 160-168.	1.4	6
77	Behavior of uranium along Jucar River (Eastern Spain): Determination of <sup>234</sup> U/ <sup>238</sup> U and <sup>235</sup> U/ <sup>238</sup> U ratios. Journal of Radioanalytical and Nuclear Chemistry, 1995, 190, 113-120.	1.5	12
78	Measurement of radium and thorium isotopes in environmental samples by alpha-spectrometry. Journal of Radioanalytical and Nuclear Chemistry, 1995, 191, 3-13.	1.5	26
79	Monte Carlo simulation of alpha spectra in low-geometry measurements. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 338, 506-510.	1.6	12
80	Radioactive concentrations of the Livingston Island soils (Antartica). Dosimetry considerations. Applied Radiation and Isotopes, 1994, 45, 675-681.	1.5	11
81	Natural and artificial radioactivity levels in Livingston Island (Antarctic Regions). Bulletin of Environmental Contamination and Toxicology, 1994, 52, 117-24.	2.7	13
82	Motion correction of multi-frame PET data. , 0, , .		11