

# Joaquin Lopez Herraiz

## List of Publications by Year in descending order

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Version: 2024-02-01

100  
papers

1,294  
citations

489802

18  
h-index

445137

33  
g-index

102  
all docs

102  
docs citations

102  
times ranked

1774  
citing authors

#	ARTICLE	IF	CITATIONS
1	Artificial Intelligence and Democratization of the Use of Lung Ultrasound in COVID-19: On the Feasibility of Automatic Calculation of Lung Ultrasound Score. International Journal of Translational Medicine, 2022, 2, 17-25.	0.1	5
2	Analysis of Cross-Combinations of Feature Selection and Machine-Learning Classification Methods Based on [18F]F-FDG PET/CT Radiomic Features for Metabolic Response Prediction of Metastatic Breast Cancer Lesions. Cancers, 2022, 14, 2922.	1.7	9
3	Super-Iterative Image Reconstruction in PET. IEEE Transactions on Computational Imaging, 2021, 7, 248-257.	2.6	4
4	Transmission-reflection optoacoustic ultrasound (TROPUS) imaging of mammary tumors. , 2021, , .		1
5	Dictionary-based protoacoustic dose map imaging for proton range verification. Photoacoustics, 2021, 21, 100240.	4.4	12
6	Deep-Learning-Driven Full-Waveform Inversion for Ultrasound Breast Imaging. Sensors, 2021, 21, 4570.	2.1	12
7	Deep-Learning Based Positron Range Correction of PET Images. Applied Sciences (Switzerland), 2021, 11, 266.	1.3	11
8	Speed of sound ultrasound transmission tomography image reconstruction based on BÃ©zier curves. Ultrasonics, 2020, 103, 106097.	2.1	12
9	Noninvasive multiparametric characterization of mammary tumors with transmission-reflection optoacoustic ultrasound. Neoplasia, 2020, 22, 770-777.	2.3	19
10	Ultrafast Ultrasound Imaging for Super-Resolution Preclinical Cardiac PET. Molecular Imaging and Biology, 2020, 22, 1342-1352.	1.3	4
11	Real-Time 3D PET Image with Pseudoinverse Reconstruction. Applied Sciences (Switzerland), 2020, 10, 2829.	1.3	6
12	Simultaneous optoacoustic, pulse-echo and transmission ultrasound tomography of mice (Conference Presentation). , 2020, , .		0
13	Computer-Vision Techniques for Water-Fat Separation in Ultra High-Field MRI Local Specific Absorption Rate Estimation. IEEE Transactions on Biomedical Engineering, 2019, 66, 768-774.	2.5	3
14	Photoacoustic dose monitoring in clinical high-energy photon beams. Biomedical Physics and Engineering Express, 2019, 5, 035028.	0.6	4
15	Transmissionâ€“reflection optoacoustic ultrasound (TROPUS) computed tomography of small animals. Light: Science and Applications, 2019, 8, 18.	7.7	71
16	PeneloPET v3.0, an improved multiplatform PET Simulator. , 2019, , .		3
17	Super-iterative image reconstruction in PET. , 2019, , .		1
18	Awake preclinical brain PET imaging based on point sources. , 2019, , .		1

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19	Dynamic PET imaging with the generalized method of moments. , 2019, , .		0
20	Application of the pseudoinverse for real-time 3D PET image reconstruction. , 2019, , .		1
21	Improving PET Quantification of Small Animal [68Ga]DOTA-Labeled PET/CT Studies by Using a CT-Based Positron Range Correction. Molecular Imaging and Biology, 2018, 20, 584-593.	1.3	20
22	Anatomically Based Analysis of Radioaerosol Distribution in Pulmonary Scintigraphy: A Feasibility Study in Asthmatics. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2018, 31, 298-310.	0.7	3
23	Design and Performance Study of a Quasi-spherical PET Scanner and Hexagonal SiPM. , 2018, , .		0
24	USCT reference data base: conclusions from the first SPIE USCT data challenge and future directions. , 2018, , .		5
25	Time domain reconstruction of sound speed and attenuation in ultrasound computed tomography using full wave inversion. Journal of the Acoustical Society of America, 2017, 141, 1595-1604.	0.5	78
26	International mentoring as a new educational approach to alleviate brain drain, empower young talent, and internationalize higher education. Nature Biotechnology, 2017, 35, 285-288.	9.4	2
27	Improved misfit function for attenuation and speed reconstruction in ultrasound computed tomography. , 2017, , .		0
28	Data-driven Improved Sampling in PET. , 2017, , .		3
29	Real-Time Accurate Rebinning of PET Data Based on the Pseudo-Inverse of the Axial System Matrix. , 2017, , .		0
30	Dynamic PET reconstruction using the split bregman formulation. , 2016, , .		0
31	Multi-Atlas and label fusion approach for patient-specific MRI based skull estimation. Magnetic Resonance in Medicine, 2016, 75, 1797-1807.	1.9	21
32	Nuclear astrophysics with radioactive ions at FAIR. Journal of Physics: Conference Series, 2016, 665, 012044.	0.3	9
33	Parallel transmission pulse design with explicit control for the specific absorption rate in the presence of radiofrequency errors. Magnetic Resonance in Medicine, 2016, 75, 2493-2504.	1.9	9
34	Experimental validation of gallium production and isotope-dependent positron range correction in PET. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 814, 110-116.	0.7	8
35	Full-wave attenuation reconstruction in the time domain for ultrasound computed tomography. , 2016, , .		4
36	Evaluation of PeneloPET Simulations of Biograph PET/CT Scanners. IEEE Transactions on Nuclear Science, 2016, 63, 1367-1374.	1.2	12

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37	Ultrasound computed tomography for quantitative breast imaging. , 2016, , .		6
38	PO-0937: Sound speed reconstruction in full wave ultrasound computer tomography for breast cancer detection. Radiotherapy and Oncology, 2016, 119, S454-S455.	0.3	0
39	Non contact elastographic techniques. , 2016, , .		0
40	Refraction correction in Full Angle Spatial image Compounding. , 2016, , .		2
41	Fast Patch-Based Pseudo-CT Synthesis from T1-Weighted MR Images for PET/MR Attenuation Correction in Brain Studies. Journal of Nuclear Medicine, 2016, 57, 136-143.	2.8	72
42	Automatic Cardiac Self-Gating of Small-Animal PET Data. Molecular Imaging and Biology, 2016, 18, 109-116.	1.3	5
43	Regularization of image reconstruction in ultrasound computed tomography. , 2015, , .		3
44	Sensitivity estimation in time-of-flight list-mode positron emission tomography. Medical Physics, 2015, 42, 6690-6702.	1.6	6
45	Improved quantification for local regions of interest in preclinical PET imaging. Physics in Medicine and Biology, 2015, 60, 7127-7149.	1.6	9
46	Fast pseudo-CT synthesis from MRI T1-weighted images using a patch-based approach. , 2015, , .		0
47	Phase space determination from measured dose data for intraoperative electron radiation therapy. Physics in Medicine and Biology, 2015, 60, 375-401.	1.6	8
48	Simulation of triple coincidences in PET. Physics in Medicine and Biology, 2015, 60, 117-136.	1.6	26
49	The Effect of Mouth Motion on the Attenuation Correction in Neurological PET Studies. Lecture Notes in Computational Vision and Biomechanics, 2015, , 63-69.	0.5	0
50	Multi-modal Ultrasound Imaging for Breast Cancer Detection. Physics Procedia, 2015, 63, 134-140.	1.2	12
51	Tissue-Dependent and Spatially-Variant Positron Range Correction in 3D PET. IEEE Transactions on Medical Imaging, 2015, 34, 2394-2403.	5.4	27
52	Recovery and normalization of triple coincidences in PET. Medical Physics, 2015, 42, 1398-1410.	1.6	26
53	Parallel transmit pulse design for patients with deep brain stimulation implants. Magnetic Resonance in Medicine, 2015, 73, 1896-1903.	1.9	56
54	SAR reduction in 7T spine imaging using a dark modes transmit array strategy. Magnetic Resonance in Medicine, 2015, 73, 1533-1539.	1.9	26

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55	Feasibility assessment of the interactive use of a Monte Carlo algorithm in treatment planning for intraoperative electron radiation therapy. <i>Physics in Medicine and Biology</i> , 2014, 59, 7159-7179.	1.6	16
56	86: Iterative Reconstruction of Clinical Electron Beam Phase Space for Intra-Operative Radiation Therapy. <i>Radiotherapy and Oncology</i> , 2014, 110, S42.	0.3	0
57	Positron range estimations with PeneloPET. <i>Physics in Medicine and Biology</i> , 2013, 58, 5127-5152.	1.6	56
58	Improved dead-time correction for PET scanners: application to small-animal PET. <i>Physics in Medicine and Biology</i> , 2013, 58, 2059-2072.	1.6	7
59	Production of positron-gamma emitters for multiplexed PET (mPET) imaging. , 2013, , .		0
60	Simulation of triple coincidences in PET. , 2013, , .		0
61	Scaling of positron range distributions in biological materials. , 2013, , .		0
62	PeneloPET study of the biograph PET scanner. , 2013, , .		0
63	Quasi elastic cross sections for the $^{209}\text{Bi}(e,e'p)^{208}\text{Pb}$ reaction: Jefferson Lab experiment E06007. <i>Journal of Physics: Conference Series</i> , 2012, 381, 012101.	0.3	0
64	Iterative Determination of Clinical Beam Phase Space From Dose Measurements. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012, 84, S869.	0.4	1
65	Automatic parameter selection in PET image reconstruction based on no-reference image quality assessment. , 2012, , .		3
66	Quantification limits of iterative PET reconstruction algorithms and improved estimation of kinetic constants. , 2011, , .		1
67	GPU-Based Fast Iterative Reconstruction of Fully 3-D PET Sinograms. <i>IEEE Transactions on Nuclear Science</i> , 2011, 58, 2257-2263.	1.2	29
68	Deadtime and pile-up correction method based on the singles to coincidences ratio for PET. , 2011, , .		1
69	Study of CT-based positron range correction in high resolution 3D PET imaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 648, S172-S175.	0.7	18
70	Fully 3D GPU PET reconstruction. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 648, S169-S171.	0.7	8
71	The electron-ion scattering experiment ELISE at the International Facility for Antiproton and Ion Research (FAIR) - A conceptual design study. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 637, 60-76.	0.7	85
72	PeneloPET simulations of the Biograph ToF clinical PET scanner. , 2011, , .		3

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73	Measurement of activity produced by low energy proton beam in metals using off-line PET imaging. , 2011, , .		1
74	A general framework to study positron range distributions. , 2011, , .		1
75	Iterative reconstruction of whole accelerator phase spaces for Intraoperative Radiation Therapy (IORT) from measured dose data. , 2011, , .		1
76	(e, e <sup>+</sup> ) reaction at true quasielastic kinematics in [ <sup>16</sup> O], [ <sup>12</sup> C] and [ <sup>208</sup> Pb] at JLab. , 2010, , .		0
77	Performance Evaluation of SiPM Photosensors in the Presence of Magnetic Fields. AIP Conference Proceedings, 2010, , .	0.3	0
78	Superscaling analysis of the Coulomb sum rule in quasielastic electron-nucleus scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 688, 250-257.	1.5	12
79	Performance evaluation of SiPM photodetectors for PET imaging in the presence of magnetic fields. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 613, 308-316.	0.7	56
80	Validation of PeneloPET positron range estimations. , 2010, , .		4
81	Measurements of the Electric Form Factor of the Neutron up to $Q^2 = 3.4$ GeV <sup>2</sup> in the Reaction $n + e \rightarrow n' + e'$ . Physical Review Letters, 2010, 105, 262302.	2.9	110
82	Validation of NEMA NU4&#x2013;2008 scatter fraction estimation with <sup>18</sup> F and <sup>68</sup> Ga for the ARGUS smallanimal PET scanner. , 2010, , .		1
83	GPU acceleration of a fully 3D Iterative Reconstruction Software for PET using CUDA. , 2009, , .		8
84	Positron range effects in high resolution 3D PET imaging. , 2009, , .		17
85	Overview of neutrino-nucleus quasielastic scattering. , 2009, , .		1
86	PeneloPET, a Monte Carlo PET simulation tool based on PENELOPE: features and validation. Physics in Medicine and Biology, 2009, 54, 1723-1742.	1.6	76
87	Frequency selective signal extrapolation for compensation of missing data in sinograms. , 2008, , .		8
88	Nonlinear effect of pile-up in the quantification of a small animal PET scanner. , 2008, , .		0
89	Performance evaluation of SiPM detectors for PET imaging in the presence of magnetic fields. , 2008, , .		13
90	Influence of random, pile-up and scatter corrections in the quantification properties of small-animal PET scanners. , 2007, , .		0

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91	Revised consistency conditions for PET data. , 2007, , .		1
92	Validation of PeneloPET against two small animal PET scanners. , 2007, , .		4
93	Improved image reconstruction in small animal PET using a priori estimates of single-pixel events. , 2007, , .		7
94	Noise and physical limits to maximum resolution of PET images. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 580, 934-937.	0.7	4
95	Optimal and Robust PET Data Sinogram Restoration Based on the Response of the System. , 2006, , .		2
96	Normalization in 3D PET: Dependence on the Activity Distribution of the Source. , 2006, , .		1
97	PeneloPET, a Monte Carlo PET simulation toolkit based on PENELOPE: Features and Validation. , 2006, , .		8
98	FIRST: Fast Iterative Reconstruction Software for (PET) tomography. Physics in Medicine and Biology, 2006, 51, 4547-4565.	1.6	86
99	Full 3D-OSEM reconstruction with compressed response of the system. , 0, , .		2
100	Statistical Reconstruction Methods in PET: Resolution Limit, Noise, Edge Artifacts and considerations for the design of better scanners. , 0, , .		5