# Joaquin Lopez Herraiz

List of Publications by Year
in descending order



| 100 | 1,294 | 430874 18 | 395702 33 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 102 | 102 | 102 | 1607 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Measurements of the Electric Form Factor of the Neutron up to<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Q</mml:mi><mml:mn>2</mml:mn></mml:msup><mml:mo>=</mml:mo><mml:mn>3.4</mml:mn> the Reaction<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mn /><mml:mn>3</mml:mn></mml:msup><mml:mover accent="true". Physical Review Letters, 2010, 105, 262302. | 7.8 | 110 |
| 2 | FIRST: Fast Iterative Reconstruction Software for (PET) tomography. Physics in Medicine and Biology, 2006, 51, 4547-4565. | 3.0 | 86 |
| 3 | The electronâ€“ion scattering experiment ELISe at the International Facility for Antiproton and Ion Research (FAIR)â€”A conceptual design study. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 637, 60-76. | 1.6 | 85 |
| 4 | 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. | 1.1 | 78 |
| 5 | PeneloPET, a Monte Carlo PET simulation tool based on PENELOPE: features and validation. Physics in Medicine and Biology, 2009, 54, 1723-1742. | 3.0 | 76 |
| 6 | 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. | 5.0 | 72 |
| 7 | Transmissionâ€“reflection optoacoustic ultrasound (TROPUS) computed tomography of small animals. Light: Science and Applications, 2019, 8, 18. | 16.6 | 71 |
| 8 | 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. | 1.6 | 56 |
| 9 | Positron range estimations with PeneloPET. Physics in Medicine and Biology, 2013, 58, 5127-5152. | 3.0 | 56 |
| 10 | Parallel transmit pulse design for patients with deep brain stimulation implants. Magnetic Resonance in Medicine, 2015, 73, 1896-1903. | 3.0 | 56 |
| 11 | GPU-Based Fast Iterative Reconstruction of Fully 3-D PET Sinograms. IEEE Transactions on Nuclear Science, 2011, 58, 2257-2263. | 2.0 | 29 |
| 12 | Tissue-Dependent and Spatially-Variant Positron Range Correction in 3D PET. IEEE Transactions on Medical Imaging, 2015, 34, 2394-2403. | 8.9 | 27 |
| 13 | Simulation of triple coincidences in PET. Physics in Medicine and Biology, 2015, 60, 117-136. | 3.0 | 26 |
| 14 | Recovery and normalization of triple coincidences in PET. Medical Physics, 2015, 42, 1398-1410. | 3.0 | 26 |
| 15 | SAR reduction in 7T Câ€spine imaging using a â€œdark modesâ€•transmit array strategy. Magnetic Resonance in Medicine, 2015, 73, 1533-1539. | 3.0 | 26 |
| 16 | Multiâ€atlas and label fusion approach for patientâ€specific MRI based skull estimation. Magnetic Resonance in Medicine, 2016, 75, 1797-1807. | 3.0 | 21 |
| 17 | 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. | 2.6 | 20 |
| 18 | Noninvasive multiparametric characterization of mammary tumors with transmission-reflection optoacoustic ultrasound. Neoplasia, 2020, 22, 770-777. | 5.3 | 19 |

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| 19 | Study of CT-based positron range correction in high resolution 3D PET imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 648, S172-S175. | 1.6 | 18 |
| 20 | Positron range effects in high resolution 3D PET imaging. , 2009, , . | | 17 |
| 21 | Feasibility assessment of the interactive use of a Monte Carlo algorithm in treatment planning for intraoperative electron radiation therapy. Physics in Medicine and Biology, 2014, 59, 7159-7179. | 3.0 | 16 |
| 22 | Performance evaluation of SiPM detectors for PET imaging in the presence of magnetic fields. , 2008, , . | | 13 |
| 23 | Superscaling analysis of the Coulomb sum rule in quasielastic electronâ€“nucleus scattering. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 688, 250-257. | 4.1 | 12 |
| 24 | Multi-modal Ultrasound Imaging for Breast Cancer Detection. Physics Procedia, 2015, 63, 134-140. | 1.2 | 12 |
| 25 | Evaluation of PeneloPET Simulations of Biograph PET/CT Scanners. IEEE Transactions on Nuclear Science, 2016, 63, 1367-1374. | 2.0 | 12 |
| 26 | Speed of sound ultrasound transmission tomography image reconstruction based on BÃ©zier curves. Ultrasonics, 2020, 103, 106097. | 3.9 | 12 |
| 27 | Dictionary-based protoacoustic dose map imaging for proton range verification. Photoacoustics, 2021, 21, 100240. | 7.8 | 12 |
| 28 | Deep-Learning-Driven Full-Waveform Inversion for Ultrasound Breast Imaging. Sensors, 2021, 21, 4570. | 3.8 | 12 |
| 29 | Deep-Learning Based Positron Range Correction of PET Images. Applied Sciences (Switzerland), 2021, 11, 266. | 2.5 | 11 |
| 30 | Improved quantification for local regions of interest in preclinical PET imaging. Physics in Medicine and Biology, 2015, 60, 7127-7149. | 3.0 | 9 |
| 31 | Nuclear astrophysics with radioactive ions at FAIR. Journal of Physics: Conference Series, 2016, 665, 012044. | 0.4 | 9 |
| 32 | 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. | 3.0 | 9 |
| 33 | 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. | 3.7 | 9 |
| 34 | PeneloPET, a Monte Carlo PET simulation toolkit based on PENELOPE: Features and Validation. , 2006, , . | | 8 |
| 35 | Frequency selective signal extrapolation for compensation of missing data in sinograms. , 2008, , . | | 8 |
| 36 | GPU acceleration of a fully 3D Iterative Reconstruction Software for PET using CUDA. , 2009, , . | | 8 |

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| 37 | Fully 3D GPU PET reconstruction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 648, S169-S171. | 1.6 | 8 |
| 38 | Phase space determination from measured dose data for intraoperative electron radiation therapy. Physics in Medicine and Biology, 2015, 60, 375-401. | 3.0 | 8 |
| 39 | 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. | 1.6 | 8 |
| 40 | Improved image reconstruction in small animal PET using a priori estimates of single-pixel events. , 2007, , . | | 7 |
| 41 | Improved dead-time correction for PET scanners: application to small-animal PET. Physics in Medicine and Biology, 2013, 58, 2059-2072. | 3.0 | 7 |
| 42 | Sensitivity estimation in timeâ€ofâ€flight listâ€mode positron emission tomography. Medical Physics, 2015, 42, 6690-6702. | 3.0 | 6 |
| 43 | Ultrasound computed tomography for quantitative breast imaging. , 2016, , . | | 6 |
| 44 | Real-Time 3D PET Image with Pseudoinverse Reconstruction. Applied Sciences (Switzerland), 2020, 10, 2829. | 2.5 | 6 |
| 45 | Statistical Reconstruction Methods in PET: Resolution Limit, Noise, Edge Artifacts and considerations for the design of better scanners. , 0, , . | | 5 |
| 46 | Automatic Cardiac Self-Gating of Small-Animal PET Data. Molecular Imaging and Biology, 2016, 18, 109-116. | 2.6 | 5 |
| 47 | USCT reference data base: conclusions from the first SPIE USCT data challenge and future directions. , 2018, , . | | 5 |
| 48 | 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. | 0.4 | 5 |
| 49 | Validation of PeneloPET against two small animal PET scanners. , 2007, , . | | 4 |
| 50 | 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. | 1.6 | 4 |
| 51 | Validation of PeneloPET positron range estimations. , 2010, , . | | 4 |
| 52 | Full-wave attenuation reconstruction in the time domain for ultrasound computed tomography. , 2016, , . | | 4 |
| 53 | Photoacoustic dose monitoring in clinical high-energy photon beams. Biomedical Physics and Engineering Express, 2019, 5, 035028. | 1.2 | 4 |
| 54 | Ultrafast Ultrasound Imaging for Super-Resolution Preclinical Cardiac PET. Molecular Imaging and Biology, 2020, 22, 1342-1352. | 2.6 | 4 |

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| 55 | Super-Iterative Image Reconstruction in PET. IEEE Transactions on Computational Imaging, 2021, 7, 248-257. | 4.4 | 4 |
| 56 | PeneloPET simulations of the Biograph ToF clinical PET scanner. , 2011, , . | | 3 |
| 57 | Automatic parameter selection in PET image reconstruction based on no-reference image quality assessment. , 2012, , . | | 3 |
| 58 | Regularization of image reconstruction in ultrasound computed tomography. , 2015, , . | | 3 |
| 59 | Data-driven Improved Sampling in PET. , 2017, , . | | 3 |
| 60 | 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. | 1.4 | 3 |
| 61 | 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. | 4.2 | 3 |
| 62 | PeneloPET v3.0, an improved multiplatform PET Simulator. , 2019, , . | | 3 |
| 63 | Full 3D-OSEM reconstruction with compressed response of the system. , 0, , . | | 2 |
| 64 | Optimal and Robust PET Data Sinogram Restoration Based on the Response of the System. , 2006, , . | | 2 |
| 65 | Refraction correction in Full Angle Spatial image Compounding. , 2016, , . | | 2 |
| 66 | International mentoring as a new educational approach to alleviate brain drain, empower young talent, and internationalize higher education. Nature Biotechnology, 2017, 35, 285-288. | 17.5 | 2 |
| 67 | Normalization in 3D PET: Dependence on the Activity Distribution of the Source. , 2006, , . | | 1 |
| 68 | Revised consistency conditions for PET data. , 2007, , . | | 1 |
| 69 | Overview of neutrino-nucleus quasielastic scattering. , 2009, , . | | 1 |
| 70 | Validation of NEMA NU4–2008 scatter fraction estimation with <sup>18</sup>F and <sup>68</sup>Ga for the ARGUS smallanimal PET scanner. , 2010, , . | | 1 |
| 71 | Quantification limits of iterative PET reconstruction algorithms and improved estimation of kinetic constants. , 2011, , . | | 1 |
| 72 | Deadtime and pile-up correction method based on the singles to coincidences ratio for PET. , 2011, , . | | 1 |

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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 | Iterative Determination of Clinical Beam Phase Space From Dose Measurements. International Journal of Radiation Oncology Biology Physics, 2012, 84, S869. | 0.8 | 1 |
| 77 | Transmission-reflection optoacoustic ultrasound (TROPUS) imaging of mammary tumors. , 2021, , . | | 1 |
| 78 | Super-iterative image reconstruction in PET. , 2019, , . | | 1 |
| 79 | Awake preclinical brain PET imaging based on point sources. , 2019, , . | | 1 |
| 80 | Application of the pseudoinverse for real-time 3D PET image reconstruction. , 2019, , . | | 1 |
| 81 | Influence of random, pile-up and scatter corrections in the quantification properties of small-animal PET scanners. , 2007, , . | | 0 |
| 82 | Nonlinear effect of pile-up in the quantification of a small animal PET scanner. , 2008, , . | | 0 |
| 83 | (e, eâ€™p) reaction at true quasielastic kinematics in [sup 16]O, [sup 12]C and [sup 208]Pb at JLab. , 2010, , . | | 0 |
| 84 | Performance Evaluation of SiPM Photosensors in the Presence of Magnetic Fields. AIP Conference Proceedings, 2010, , . | 0.4 | 0 |
| 85 | Quasi elastic cross sections for the209Bi(e,e'p)208Pbreaction: Jefferson Lab experiment E06007. Journal of Physics: Conference Series, 2012, 381, 012101. | 0.4 | 0 |
| 86 | Production of positron-gamma emitters for multiplexed PET (mPET) imaging. , 2013, , . | | 0 |
| 87 | Simulation of triple coincidences in PET. , 2013, , . | | 0 |
| 88 | Scaling of positron range distributions in biological materials. , 2013, , . | | 0 |
| 89 | PeneloPET study of the biograph PET scanner. , 2013, , . | | 0 |
| 90 | 86: Iterative Reconstruction of Clinical Electron Beam Phase Space for Intra-Operative Radiation Therapy. Radiotherapy and Oncology, 2014, 110, S42. | 0.6 | 0 |

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| 91 | Fast pseudo-CT synthesis from MRI T1-weighted images using a patch-based approach. , 2015, , . | | 0 |
| 92 | 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 |
| 93 | Dynamic PET reconstruction using the split bregman formulation. , 2016, , . | | 0 |
| 94 | PO-0937: Sound speed reconstruction in full wave ultrasound computer tomography for breast cancer detection. Radiotherapy and Oncology, 2016, 119, S454-S455. | 0.6 | 0 |
| 95 | Non contact elastographic techniques. , 2016, , . | | 0 |
| 96 | Improved misfit function for attenuation and speed reconstruction in ultrasound computed tomography. , 2017, , . | | 0 |
| 97 | Real-Time Accurate Rebinning of PET Data Based on the Pseudo-Inverse of the Axial System Matrix. , 2017, , . | | 0 |
| 98 | Design and Performance Study of a Quasi-spherical PET Scanner and Hexagonal SiPM. , 2018, , . | | 0 |
| 99 | Dynamic PET imaging with the generalized method of moments. , 2019, , . | | 0 |
| 100 | Simultaneous optoacoustic, pulse-echo and transmission ultrasound tomography of mice (Conference Presentation). , 2020, , . | | 0 |