Samuel Espaa

List of Publications by Citations

58 papers	1,013 citations	14 h-index	31 g-index
65 ext. papers	1,194 ext. citations	3.3 avg, IF	4.11 L-index

#	Paper	IF	Citations
58	Monte Carlo patient study on the comparison of prompt gamma and PET imaging for range verification in proton therapy. *Physics in Medicine and Biology*, **2011**, 56, 1063-82	3.8	125
57	Monitoring proton radiation therapy with in-room PET imaging. *Physics in Medicine and Biology*, **2011**, 56, 4041-57	3.8	86
56	DigiPET: sub-millimeter spatial resolution small-animal PET imaging using thin monolithic scintillators. *Physics in Medicine and Biology*, **2014**, 59, 3405-20	3.8	77
55	Vascular Inflammation in Subclinical Atherosclerosis Detected by Hybrid PET/MRI. *Journal of the American College of Cardiology*, **2019**, 73, 1371-1382	15.1	70
54	FIRST: Fast Iterative Reconstruction Software for (PET) tomography. *Physics in Medicine and Biology* , **2006**, 51, 4547-65	3.8	66
53	Clinical consequences of relative biological effectiveness variations in proton radiotherapy of the prostate, brain and liver. *Physics in Medicine and Biology*, **2013**, 58, 2103-17	3.8	64
52	PeneloPET, a Monte Carlo PET simulation tool based on PENELOPE: features and validation. *Physics in Medicine and Biology*, **2009**, 54, 1723-42	3.8	61
51	The reliability of proton-nuclear interaction cross-section data to predict proton-induced PET images in proton therapy. *Physics in Medicine and Biology*, **2011**, 56, 2687-98	3.8	56
50	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	1.2	49
49	The impact of uncertainties in the CT conversion algorithm when predicting proton beam ranges in patients from dose and PET-activity distributions. *Physics in Medicine and Biology*, **2010**, 55, 7557-71	3.8	46
48	Design and performance evaluation of a coplanar multimodality scanner for rodent imaging. *Physics in Medicine and Biology*, **2009**, 54, 5427-41	3.8	46
47	Positron range estimations with PeneloPET. *Physics in Medicine and Biology*, **2013**, 58, 5127-52	3.8	43
46	Uncertainties in planned dose due to the limited voxel size of the planning CT when treating lung tumors with proton therapy. *Physics in Medicine and Biology*, **2011**, 56, 3843-56	3.8	29
45	GPU-Based Fast Iterative Reconstruction of Fully 3-D PET Sinograms. *IEEE Transactions on Nuclear Science*, **2011**, 58, 2257-2263	1.7	23
44	Cardiovascular imaging: what have we learned from animal models?. *Frontiers in Pharmacology*, **2015**, 6, 227	5.6	14
43	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	1.2	14
42	Positron range effects in high resolution 3D PET imaging **2009**,		14

41	Optimized light sharing for high-resolution TOF PET detector based on digital silicon photomultipliers. *Physics in Medicine and Biology*, **2014**, 59, 7125-39	3.8	11
40	Fast calibration of SPECT monolithic scintillation detectors using un-collimated sources. *Physics in Medicine and Biology*, **2013**, 58, 4807-25	3.8	11
39	Effects of Colchicine on Atherosclerotic Plaque Stabilization: a Multimodality Imaging Study in an Animal Model. *Journal of Cardiovascular Translational Research*, **2021**, 14, 150-160	3.3	10
38	Performance evaluation of SiPM detectors for PET imaging in the presence of magnetic fields **2008**,		8
37	Assessment of regional pulmonary blood flow using Ga-DOTA PET. *EJNMMI Research*, **2017**, 7, 7	3.6	6
36	Fully 3D GPU PET reconstruction. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2011**, 648, S169-S171	1.2	6
35	Design of a realistic PET-CT-MRI phantom **2011**,		6
34	Frequency selective signal extrapolation for compensation of missing data in sinograms **2008**,		6
33	Evaluation of PeneloPET Simulations of Biograph PET/CT Scanners. *IEEE Transactions on Nuclear Science*, **2016**, 63, 1367-1374	1.7	5
32	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	1.2	5
31	VrPET/CT: Development of a rotating multimodality scanner for small-animal imaging **2008**,		4
30	Quantitative assessment of myocardial blood flow and extracellular volume fraction using Ga-DOTA-PET: A feasibility and validation study in large animals. *Journal of Nuclear Cardiology*, **2020**, 27, 1249-1260	2.1	4
29	Effects of dark counts on Digital Silicon Photomultipliers performance **2013**,		3
28	Effects of the Super Bialkali Photocathode on the Performance Characteristics of a Position-Sensitive Depth-of-Interaction PET Detector Module. *IEEE Transactions on Nuclear Science*, **2010**, 57, 2437-2441	1.7	3
27	GPU acceleration of a fully 3D Iterative Reconstruction Software for PET using CUDA **2009**,		3
26	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	1.2	3
25	Simultaneous emission and attenuation reconstruction in time-of-flight PET using a reference object. *EJNMMI Physics*, **2020**, 7, 3	4.4	3
24	In Vivo □-FDG-PET Imaging in Mouse Atherosclerosis. *Methods in Molecular Biology*, **2015**, 1339, 377-86	1.4	3

23	Monte Carlo simulations versus experimental measurements in a small animal PET system. A comparison in the NEMA NU 4-2008 framework. *Physics in Medicine and Biology*, **2015**, 60, 151-62	3.8	2
22	Evaluation of resistive-plate-chamber-based TOF-PET applied to in-beam particle therapy monitoring. *Physics in Medicine and Biology*, **2015**, 60, N187-208	3.8	2
21	Improved dead-time correction for PET scanners: application to small-animal PET. *Physics in Medicine and Biology*, **2013**, 58, 2059-72	3.8	2
20	Effects of the Super Bialkali photocathode on the performance characteristics of a position-sensitive depth-of-interaction PET detector module **2008**,		2
19	Validation of PeneloPET against two small animal PET scanners **2007**,		2
18	Improved image reconstruction in small animal PET using a priori estimates of single-pixel events **2007**,		2
17	Explicit measurement of multi-tracer arterial input function for PET imaging using blood sampling spectroscopy. *EJNMMI Physics*, **2020**, 7, 7	4.4	2
16	Magnetic Resonance Imaging of the Atherosclerotic Mouse Aorta. *Methods in Molecular Biology*, **2015**, 1339, 387-94	1.4	2
15	Optimization of purification techniques for lumen-loaded magnetoliposomes. *Nanotechnology*, **2020**, 31, 145102	3.4	2
14	Bone marrow activation in response to metabolic syndrome and early atherosclerosis.. *European Heart Journal*, **2022**,	9.5	2
13	Performance characterization of a compact SPECT detector based on dSiPMs and monolithic LYSO **2013**,		1
12	Misalignments calibration in small-animal PET scanners based on rotating planar detectors and parallel-beam geometry. *Physics in Medicine and Biology*, **2012**, 57, 7493-518	3.8	1
11	Normalization in 3D PET: Dependence on the Activity Distribution of the Source **2006**,		1
10	Revised consistency conditions for PET data **2007**,		1
9	Optimal and Robust PET Data Sinogram Restoration Based on the Response of the System **2006**,		1
8	Development of a blood sample detector for multi-tracer positron emission tomography using gamma spectroscopy. *EJNMMI Physics*, **2019**, 6, 25	4.4	1
7	Radiochromic film dosimetry for protons up to 10 MeV with EBT2, EBT3 and unlaminated EBT3 films. *Physics in Medicine and Biology*, **2021**, 66,	3.8	1
6	Direct proton range verification using oxygen-18 enriched water as a contrast agent. *Radiation Physics and Chemistry*, **2021**, 182, 109385	2.5	1

5	PeneloPET v3.0, an improved multiplatform PET Simulator **2019**,		1
4	Analysis of F-Sodium Fluoride Positron Emission Tomography Signal Sources in Atherosclerotic Minipigs Shows Specific Binding of F-Sodium Fluoride to Plaque Calcifications. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2021**, 41, e480-e490	9.4	1
3	In vivo production of fluorine-18 in a chicken egg tumor model of breast cancer for proton therapy range verification.. *Scientific Reports*, **2022**, 12, 7075	4.9	0
2	The effect of tissue-segmented attenuation maps on PET quantification with a special focus on large arteries. *Revista Espanola De Medicina Nuclear E Imagen Molecular*, **2018**, 37, 94-102	0.4	
1	TH-C-BRB-06: Comparison of Prompt Gamma and PET Imaging for Range Verification in Proton Therapy. *Medical Physics*, **2011**, 38, 3854-3854	4.4	