

# Stefaan Vandenberghe

## List of Publications by Year in descending order

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Version: 2024-02-01

56  
papers

1,226  
citations

471061

17  
h-index

377514

34  
g-index

56  
all docs

56  
docs citations

56  
times ranked

1390  
citing authors

#	ARTICLE	IF	CITATIONS
1	State of the art in total body PET. EJNMMI Physics, 2020, 7, 35.	1.3	196
2	Roadmap toward the 10 ps time-of-flight PET challenge. Physics in Medicine and Biology, 2020, 65, 21RM01.	1.6	136
3	DigiPET: sub-millimeter spatial resolution small-animal PET imaging using thin monolithic scintillators. Physics in Medicine and Biology, 2014, 59, 3405-3420.	1.6	93
4	Advanced Monte Carlo simulations of emission tomography imaging systems with GATE. Physics in Medicine and Biology, 2021, 66, 10TR03.	1.6	82
5	Fast reconstruction of 3D time-of-flight PET data by axial rebinning and transverse mashing. Physics in Medicine and Biology, 2006, 51, 1603-1621.	1.6	76
6	Sub-millimetre DOI detector based on monolithic LYSO and digital SiPM for a dedicated small-animal PET system. Physics in Medicine and Biology, 2016, 61, 2196-2212.	1.6	57
7	Iterative CT Reconstruction Using Shearlet-Based Regularization. IEEE Transactions on Nuclear Science, 2013, 60, 3305-3317.	1.2	55
8	EEG source connectivity to localize the seizure onset zone in patients with drug resistant epilepsy. NeuroImage: Clinical, 2017, 16, 689-698.	1.4	50
9	Seizure Onset Zone Localization from Ictal High-Density EEG in Refractory Focal Epilepsy. Brain Topography, 2017, 30, 257-271.	0.8	50
10	A dosimetry procedure for organs-at-risk in <sup>177</sup> Lu peptide receptor radionuclide therapy of patients with neuroendocrine tumours. Physica Medica, 2018, 56, 41-49.	0.4	32
11	Influence of detector pixel size, TOF resolution and DOI on image quality in MR-compatible whole-body PET. Physics in Medicine and Biology, 2013, 58, 6459-6479.	1.6	28
12	Artificial intelligence with deep learning in nuclear medicine and radiology. EJNMMI Physics, 2021, 8, 81.	1.3	26
13	Standardization of Preclinical PET/CT Imaging to Improve Quantitative Accuracy, Precision, and Reproducibility: A Multicenter Study. Journal of Nuclear Medicine, 2020, 61, 461-468.	2.8	23
14	Bayesian model selection of template forward models for EEG source reconstruction. NeuroImage, 2014, 93, 11-22.	2.1	21
15	Optical simulation study on the spatial resolution of a thick monolithic PET detector. Physics in Medicine and Biology, 2019, 64, 195003.	1.6	20
16	Accuracy and precision assessment for activity quantification in individualized dosimetry of <sup>177</sup> Lu-DOTATATE therapy. EJNMMI Physics, 2017, 4, 7.	1.3	18
17	Artificial neural networks for positioning of gamma interactions in monolithic PET detectors. Physics in Medicine and Biology, 2021, 66, 075001.	1.6	18
18	Reconstruction for Gated Dynamic Cardiac PET Imaging Using a Tensor Product Spline Basis. IEEE Transactions on Nuclear Science, 2007, 54, 80-91.	1.2	17

#	ARTICLE	IF	CITATIONS
19	Plant-PET to investigate phloem vulnerability to drought in <i>Populus tremula</i> under changing climate regimes. <i>Tree Physiology</i> , 2019, 39, 211-221.	1.4	17
20	High-resolution monolithic LYSO detector with 6-layer depth-of-interaction for clinical PET. <i>Physics in Medicine and Biology</i> , 2021, 66, 155014.	1.6	17
21	Electrical source imaging of interictal spikes using multiple sparse volumetric priors for presurgical epileptogenic focus localization. <i>NeuroImage: Clinical</i> , 2016, 11, 252-263.	1.4	16
22	Guide to Plant-PET Imaging Using $^{11}\text{CO}_2$ . <i>Frontiers in Plant Science</i> , 2021, 12, 602550.	1.7	15
23	Fast calibration of SPECT monolithic scintillation detectors using un-collimated sources. <i>Physics in Medicine and Biology</i> , 2013, 58, 4807-4825.	1.6	14
24	Optimization of time-of-flight reconstruction on Philips GEMINI TF. <i>European Journal of Nuclear Medicine and Molecular Imaging</i> , 2009, 36, 1994-2001.	3.3	13
25	System characteristics of simulated limited angle TOF PET. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007, 571, 480-483.	0.7	12
26	Design of a high resolution scintillator based SPECT detector (SPECTatress). <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 648, S107-S110.	0.7	12
27	$^{18}\text{F}$ -FDG micro-PET/CT for intra-operative margin assessment during breast-conserving surgery. <i>Acta Chirurgica Belgica</i> , 2020, 120, 366-374.	0.2	11
28	Use of a Ray-Based Reconstruction Algorithm to Accurately Quantify Preclinical MicroSPECT Images. <i>Molecular Imaging</i> , 2014, 13, 7290.2014.00007.	0.7	10
29	Design of a realistic PET-CT-MRI phantom. , 2011, , .		8
30	FlexiSPECT: A SPECT System Consisting of a Compact High-Resolution Scintillation Detector (SPECTatress) and a Lofthole Collimator. <i>IEEE Transactions on Nuclear Science</i> , 2013, 60, 53-64.	1.2	8
31	Progress and perspectives in total body PET systems instrumentation. <i>Bio-Algorithms and Med-Systems</i> , 2022, 17, 265-267.	1.0	8
32	Effects of dark counts on Digital Silicon Photomultipliers performance. , 2013, , .		7
33	Monte Carlo Simulations of the GE Signa PET/MR for Different Radioisotopes. <i>Frontiers in Physiology</i> , 2020, 11, 525575.	1.3	7
34	Studying in vivo dynamics of xylem-transported $^{11}\text{CO}_2$ using positron emission tomography. <i>Tree Physiology</i> , 2020, 40, 1058-1070.	1.4	7
35	The lofthole: A novel shaped pinhole geometry for optimal detector usage without multiplexing and without additional shielding. , 2011, , .		6
36	Multiple sparse volumetric priors for distributed EEG source reconstruction. <i>NeuroImage</i> , 2014, 100, 715-724.	2.1	6

#	ARTICLE	IF	CITATIONS
37	Experimental evaluation of simultaneous emission and transmission imaging using TOF information. , 2011, , .		5
38	Design of a static full-ring multi-pinhole collimator for brain SPECT. , 2011, , .		3
39	Dual energy microCT for small animal bone-iodine decomposition. , 2012, , .		3
40	Efficient optimization for adaptive SPECT systems based on local shift-invariance. , 2012, , .		3
41	Effect of Local TOF Kernel Miscalibrations on Contrast-Noise in TOF PET. IEEE Transactions on Nuclear Science, 2013, 60, 1578-1588.	1.2	3
42	Comparison of 3D SPECT imaging with a rotating slat collimator and a parallel hole collimator. , 2008, , .		2
43	Simulation of complex geometries in GATE. , 2009, , .		2
44	A high resolution scintillator based SPECT detector with digital pulse processing (SPECTatress). , 2010, , .		2
45	Evaluation of image Signal-to-Noise Ratio in Time-of-Flight PET. , 2011, , .		2
46	Simultaneous reconstruction of attenuation and activity in ToF PET/MRI with additional transmission data. EJNMMI Physics, 2015, 2, A33.	1.3	2
47	Comparison of Partial Volume Correction Techniques for Lesions Near High Activity Regions. , 2017, , .		2
48	Performance evaluation of a micro-CT system for laboratory animal imaging with iterative reconstruction capabilities. Medical Physics, 2022, 49, 3121-3133.	1.6	2
49	Absolute quantification for small-animal PET. , 2011, , .		1
50	Evaluation of the local shift-invariance approximation in pinhole SPECT. , 2013, , .		1
51	Simulation study on the performance of time-over-threshold based positioning in monolithic PET detectors. Physics in Medicine and Biology, 2021, 66, 245025.	1.6	1
52	Acceleration of GATE SPECT simulations. , 2007, , .		0
53	Time-multiplexing using a static full-ring multi-pinhole collimator for brain SPECT. , 2012, , .		0
54	Data completeness in multiplexing multi-pinhole SPECT. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
55	Geometric optimization of an ultralow-dose high-resolution pediatric PET scanner based on monolithic scintillators with dSiPM readout. EJNMMI Physics, 2015, 2, A23.	1.3	0
56	Mitigating the Adverse Effect of Compton Scatter on the Positioning of Gamma Interactions in Large Monolithic PET Detectors. , 2020, , .		0