Steven Meikle

List of Publications by Citations

139 papers	3,164 citations	33 h-index	52 g-index
182 ext. papers	3,632 ext. citations	4.1 avg, IF	4.79 L-index

#	Paper	IF	Citations
139	Small animal SPECT and its place in the matrix of molecular imaging technologies. *Physics in Medicine and Biology*, **2005**, 50, R45-61	3.8	256
138	A convolution-subtraction scatter correction method for 3D PET. *Physics in Medicine and Biology*, **1994**, 39, 411-24	3.8	163
137	Two-dimensional myocardial strain imaging detects changes in left ventricular systolic function immediately after anthracycline chemotherapy. *European Journal of Echocardiography*, **2011**, 12, 945-52		115
136	Positron emission tomography imaging of neuroinflammation. *Neurotherapeutics*, **2007**, 4, 443-52	6.4	112
135	Inhalation of hypertonic saline aerosol enhances mucociliary clearance in asthmatic and healthy subjects. *European Respiratory Journal*, **1996**, 9, 725-32	13.6	110
134	Correction for head movements in positron emission tomography using an optical motion-tracking system. *IEEE Transactions on Nuclear Science*, **2002**, 49, 116-123	1.7	108
133	Synthesis and in vivo evaluation of a novel peripheral benzodiazepine receptor PET radioligand. *Bioorganic and Medicinal Chemistry*, **2005**, 13, 6188-94	3.4	94
132	Segmentation of dynamic PET images using cluster analysis. *IEEE Transactions on Nuclear Science*, **2002**, 49, 200-207	1.7	91
131	. *IEEE Transactions on Nuclear Science*, **2002**, 49, 2167-2171	1.7	87
130	Does fluorine-18 fluorodeoxyglucose metabolic imaging of tumours benefit oncology?. *European Journal of Nuclear Medicine and Molecular Imaging*, **1997**, 24, 691-705		77
129	ECAT ART - a continuously rotating PET camera: performance characteristics, initial clinical studies, and installation considerations in a nuclear medicine department. *European Journal of Nuclear Medicine and Molecular Imaging*, **1997**, 24, 6-15		68
128	Parametric image reconstruction using spectral analysis of PET projection data. *Physics in Medicine and Biology*, **1998**, 43, 651-66	3.8	68
127	Postreconstruction nonlocal means filtering of whole-body PET with an anatomical prior. *IEEE Transactions on Medical Imaging*, **2014**, 33, 636-50	11.7	61
126	Real-time 3D motion tracking for small animal brain PET. *Physics in Medicine and Biology*, **2008**, 53, 2651-66	3.8	60
125	Airway closure measured by a technegas bolus and SPECT. *American Journal of Respiratory and Critical Care Medicine*, **1997**, 155, 682-8	10.2	58
124	Accelerated EM reconstruction in total-body PET: potential for improving tumour detectability. *Physics in Medicine and Biology*, **1994**, 39, 1689-704	3.8	58
123	In vivo imaging of nicotinic receptor upregulation following chronic (-)-nicotine treatment in baboon using SPECT. *Nuclear Medicine and Biology*, **2001**, 28, 165-75	2.1	56

122	Electrocardiographic measurement of infarct size after thrombolytic therapy. *Journal of the American College of Cardiology*, **1996**, 27, 617-24	15.1	55
121	In vivo evidence for microglial activation in neurodegenerative dementia. *Acta Neurologica Scandinavica*, **2006**, 185, 107-14	3.8	54
120	Simultaneous estimation of physiological parameters and the input function--in vivo PET data. *IEEE Transactions on Information Technology in Biomedicine*, **2001**, 5, 67-76		54
119	Pharmacokinetic assessment of novel anti-cancer drugs using spectral analysis and positron emission tomography: a feasibility study. *Cancer Chemotherapy and Pharmacology*, **1998**, 42, 183-93	3.5	52
118	Altered left ventricular longitudinal diastolic function correlates with reduced systolic function immediately after anthracycline chemotherapy. *European Heart Journal Cardiovascular Imaging*, **2013**, 14, 228-34	4.1	49
117	Optimised motion tracking for positron emission tomography studies of brain function in awake rats. *PLoS ONE*, **2011**, 6, e21727	3.7	47
116	Current role of gallium scanning in the management of lymphoma. *European Journal of Nuclear Medicine and Molecular Imaging*, **1990**, 16, 755-71		45
115	An investigation of coded aperture imaging for small animal SPECT. *IEEE Transactions on Nuclear Science*, **2001**, 48, 816-821	1.7	44
114	Characterisation of partial volume effect and region-based correction in small animal positron emission tomography (PET) of the rat brain. *NeuroImage*, **2012**, 60, 2144-57	7.9	41
113	Left ventricular systolic function in HER2/neu negative breast cancer patients treated with anthracycline chemotherapy: a comparative analysis of left ventricular ejection fraction and myocardial strain imaging over 12 months. *European Journal of Cancer*, **2013**, 49, 3396-403	7.5	41
112	Regularized image reconstruction with an anatomically adaptive prior for positron emission tomography. *Physics in Medicine and Biology*, **2009**, 54, 7379-400	3.8	39
111	A practical 3D tomographic method for correcting patient head motion in clinical SPECT. *IEEE Transactions on Nuclear Science*, **1999**, 46, 667-672	1.7	39
110	Ligands for peripheral benzodiazepine binding sites in glial cells. *Brain Research Reviews*, **2005**, 48, 207-10		37
109	An event-driven motion correction method for neurological PET studies of awake laboratory animals. *Molecular Imaging and Biology*, **2008**, 10, 315-24	3.8	35
108	Strategies for attenuation compensation in neurological PET studies. *NeuroImage*, **2007**, 34, 518-41	7.9	34
107	Markerless motion tracking of awake animals in positron emission tomography. *IEEE Transactions on Medical Imaging*, **2014**, 33, 2180-90	11.7	33
106	Estimation of input function and kinetic parameters using simulated annealing: application in a flow model. *IEEE Transactions on Nuclear Science*, **2002**, 49, 707-713	1.7	29
105	A restraint-free small animal SPECT imaging system with motion tracking. *IEEE Transactions on Nuclear Science*, **2005**, 52, 638-644	1.7	25

104	Evaluation of transmission methodology and attenuation correction for the microPET Focus 220 animal scanner. *Physics in Medicine and Biology*, **2006**, 51, 4003-16	3.8	24
103	Trishomocubanes: novel sigma ligands modulate cocaine-induced behavioural effects. *European Journal of Pharmacology*, **2007**, 555, 37-42	5.3	23
102	Transmission-based scatter correction of 180 degrees myocardial single-photon emission tomographic studies. *European Journal of Nuclear Medicine and Molecular Imaging*, **1996**, 23, 1300-8		23
101	Complementary molecular imaging technologies: High resolution SPECT, PET and MRI. *Drug Discovery Today: Technologies*, **2006**, 3, 187-94	7.1	22
100	Assessment of cancer-associated biomarkers by positron emission tomography: advances and challenges. *Disease Markers*, **2002**, 18, 211-47	3.2	21
99	Noise-reducing algorithms do not necessarily provide superior dose optimisation for hepatic lesion detection with multidetector CT. *British Journal of Radiology*, **2013**, 86, 20120500	3.4	20
98	Analytical positron range modelling in heterogeneous media for PET Monte Carlo simulation. *Physics in Medicine and Biology*, **2011**, 56, 3313-35	3.8	20
97	In vivo PET imaging with [(18)F]FDG to explain improved glucose uptake in an apolipoprotein A-I treated mouse model of diabetes. *Diabetologia*, **2016**, 59, 1977-84	10.3	19
96	Median non-local means filtering for low SNR image denoising: Application to PET with anatomical knowledge **2010**,		18
95	Optimized sampling and parameter estimation for quantification in whole body PET. *IEEE Transactions on Biomedical Engineering*, **1996**, 43, 1021-8	5	17
94	Open-field PET: Simultaneous brain functional imaging and behavioural response measurements in freely moving small animals. *NeuroImage*, **2019**, 188, 92-101	7.9	17
93	Instrumentation and methodology for quantitative pre-clinical imaging studies. *Current Pharmaceutical Design*, **2001**, 7, 1945-66	3.3	16
92	Imaging capabilities of the Inveon SPECT system using single-and multipinhole collimators. *Journal of Nuclear Medicine*, **2013**, 54, 1833-40	8.9	15
91	Tracking and characterizing the head motion of unanaesthetized rats in positron emission tomography. *Journal of the Royal Society Interface*, **2012**, 9, 3094-107	4.1	15
90	A Motion Adaptive Animal Chamber for PET Imaging of Freely Moving Animals. *IEEE Transactions on Nuclear Science*, **2013**, 60, 3423-3431	1.7	14
89	BrachyView: proof-of-principle of a novel in-body gamma camera for low dose-rate prostate brachytherapy. *Medical Physics*, **2013**, 40, 041709	4.4	14
88	A scheme for PET data normalization in event-based motion correction. *Physics in Medicine and Biology*, **2009**, 54, 5321-39	3.8	14
87	Quantitative Techniques in PET **2005**, 93-126		14

86	The potential role of echocardiographic strain imaging for evaluating cardiotoxicity due to cancer therapy. *Heart Lung and Circulation*, **2011**, 20, 3-9	1.8	13
85	The role of positron emission tomography in the discovery and development of new drugs; as studied in laboratory animals. *European Journal of Drug Metabolism and Pharmacokinetics*, **2004**, 29, 1-6	2.7	13
84	An investigation of inconsistent projections and artefacts in multi-pinhole SPECT with axially aligned pinholes. *Physics in Medicine and Biology*, **2011**, 56, 7487-503	3.8	12
83	Synthesis and in vivo evaluation of [18F]N-(2-benzofuranylmethyl)-NS[4-(2-fluoroethoxy)benzyl]piperazine, a novel 1 receptor PET imaging agent. *Bioorganic and Medicinal Chemistry Letters*, **2011**, 21, 6820-3	2.9	11
82	Benchmarking of a motion sensing system for medical imaging and radiotherapy. *Physics in Medicine and Biology*, **2008**, 53, 5845-57	3.8	11
81	The influence of tomograph sensitivity on kinetic parameter estimation in positron emission tomography imaging studies of the rat brain. *Nuclear Medicine and Biology*, **2000**, 27, 617-25	2.1	11
80	Simultaneous emission and transmission measurements as an adjunct to dynamic planar gamma camera studies. *European Journal of Nuclear Medicine and Molecular Imaging*, **1996**, 23, 326-31		11
79	Performance evaluation of quantitative SPECT/CT using NEMA NU 2 PET methodology. *Physics in Medicine and Biology*, **2019**, 64, 145017	3.8	10
78	4D PET iterative deconvolution with spatiotemporal regularization for quantitative dynamic PET imaging. *NeuroImage*, **2015**, 118, 484-93	7.9	10
77	Markerless motion estimation for motion-compensated clinical brain imaging. *Physics in Medicine and Biology*, **2018**, 63, 105018	3.8	10
76	Trastuzumab-induced cardiotoxicity: the role of two-dimensional myocardial strain imaging in diagnosis and management. *Echocardiography*, **2012**, 29, E137-40	1.5	10
75	The 18 kDa translocator protein (peripheral benzodiazepine receptor) expression in the bone of normal, osteoprotegerin or low calcium diet treated mice. *PLoS ONE*, **2012**, 7, e30623	3.7	10
74	Direct Estimation of Voxel-Wise Neurotransmitter Response Maps From Dynamic PET Data. *IEEE Transactions on Medical Imaging*, **2019**, 38, 1371-1383	11.7	10
73	Stochastic simulation of radium-223 dichloride therapy at the sub-cellular level. *Physics in Medicine and Biology*, **2015**, 60, 6087-96	3.8	9
72	A non-local post-filtering algorithm for PET incorporating anatomical knowledge **2009**,		9
71	Effective sensitivity in 3D PET: the impact of detector dead time on 3D system performance. *IEEE Transactions on Nuclear Science*, **1997**, 44, 1180-1185	1.7	9
70	Simultaneous emission and transmission (SET) scanning in neurological PET studies. *Journal of Computer Assisted Tomography*, **1997**, 21, 487-97	2.2	9
69	Open-field mouse brain PET: design optimisation and detector characterisation. *Physics in Medicine and Biology*, **2017**, 62, 6207-6225	3.8	8

68	Simulation-based optimisation of the PET data processing for partial saturation approach protocols. *NeuroImage*, **2014**, 97, 29-40	7.9	8
67	Motion tracking of fully conscious small animals in PET **2009**,		8
66	Image-based modelling of residual blurring in motion corrected small animal PET imaging using motion dependent point spread functions. *Biomedical Physics and Engineering Express*, **2018**, 4, 035032	1.5	7
65	Challenges in molecular imaging of Parkinson's disease: a brief overview. *Brain Research Bulletin*, **2009**, 78, 105-8	3.9	7
64	Quantitative PET in the 2020s: a roadmap. *Physics in Medicine and Biology*, **2021**, 66, 06RM01	3.8	7
63	SPECT using asymmetric pinholes with truncated projections. *Physics in Medicine and Biology*, **2011**, 56, 4103-18	3.8	6
62	The effect of time domain pose filtering on accuracy of small marker based motion correction in awake animal PET **2011**,		6
61	Spectral characterization of a blue-enhanced silicon photodetector. *IEEE Transactions on Nuclear Science*, **2001**, 48, 1220-1224	1.7	6
60	Classification of Neurotransmitter Response in Dynamic PET Data Using Machine Learning Approaches. *IEEE Transactions on Radiation and Plasma Medical Sciences*, **2020**, 4, 708-719	4.2	5
59	Attenuation correction for freely moving small animal brain PET studies based on a virtual scanner geometry. *Physics in Medicine and Biology*, **2014**, 59, 5651-66	3.8	5
58	An investigation of the challenges in reconstructing PET images of a freely moving animal. *Australasian Physical and Engineering Sciences in Medicine*, **2013**, 36, 405-15	1.9	5
57	Projection Process Modelling for Iterative Reconstruction of Pinhole SPECT. *IEEE Transactions on Nuclear Science*, **2010**, 57, 2578-2586	1.7	5
56	High-resolution imaging of the large non-human primate brain using microPET: a feasibility study. *Physics in Medicine and Biology*, **2007**, 52, 6627-38	3.8	5
55	Design of multipinhole collimators for small animal SPECT		5
54	In silico investigation of factors affecting the MV imaging performance of a novel water-equivalent EPID. *Physica Medica*, **2016**, 32, 1819-1826	2.7	4
53	Determining Glucose Metabolism Kinetics Using 18F-FDG Micro-PET/CT. *Journal of Visualized Experiments*, **2017**,	1.6	4
52	A motion adaptive animal chamber for PET imaging of freely moving animals **2010**,		4
51	Minimum cross-entropy reconstruction of PET images with anatomically based anisotropic median-diffusion filtering. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2007**, 2007, 6528-31		4

50	Does fluorine-18 fluorodeoxyglucose metabolic imaging of tumours benefit oncology?. *European Journal of Nuclear Medicine and Molecular Imaging*, **1997**, 24, 691-705	8.8	4
49	Rigid motion correction of dual opposed planar projections in single photon imaging. *Physics in Medicine and Biology*, **2017**, 62, 3923-3943	3.8	3
48	Efficient time-weighted sensitivity image calculation for motion compensated list mode reconstruction **2014**,		3
47	Optimization of computed tomography protocols: limitations of a methodology employing a phantom with location-known opacities. *Journal of Digital Imaging*, **2013**, 26, 1001-7	5.3	3
46	Refraction-compensated motion tracking of unrestrained small animals in positron emission tomography. *Medical Image Analysis*, **2012**, 16, 1317-28	15.4	3
45	Event-based motion correction for PET transmission measurements with a rotating point source. *Physics in Medicine and Biology*, **2011**, 56, 2651-65	3.8	3
44	Count Rate Performance of the MicroPET Focus 220 Animal Scanner in Singles Transmission Scanning Mode. *IEEE Transactions on Nuclear Science*, **2008**, 55, 2493-2500	1.7	3
43	Correction for continuous motion in small animal PET **2008**,		3
42	An anatomically based regionally adaptive prior for MAP reconstruction in emission tomography **2007**,		3
41	Event-by-event motion compensation in 3D PET		3
40	Cluster-based Direct Estimation of Parametric Maps of Dopamine Response in Dynamic PET Data **2017**,		2
39	Direct estimation of neurotransmitter response in awake and freely moving animals **2015**,		2
38	Impact of extraneous mispositioned events on motion-corrected brain SPECT images of freely moving animals. *Medical Physics*, **2014**, 41, 092502	4.4	2
37	Scatter correction for large non-human primate brain imaging using microPET. *Physics in Medicine and Biology*, **2011**, 56, 2131-43	3.8	2
36	Attenuation correction for the large non-human primate brain imaging using microPET. *Physics in Medicine and Biology*, **2010**, 55, 2351-63	3.8	2
35	FastMIST: A Fast Molecular Imaging SimulaTor **2012**,		2
34	List-mode image reconstruction for positron emission tomography using tetrahedral voxels. *Physics in Medicine and Biology*, **2016**, 61, N497-N513	3.8	2
33	Denoising non-steady state dynamic PET data using a feed-forward neural network. *Physics in Medicine and Biology*, **2021**, 66, 034001	3.8	2

32	Motion compensation using origin ensembles in awake small animal positron emission tomography. *Physics in Medicine and Biology*, **2017**, 62, 715-733	3.8	1
31	Clustering Analysis for Neurotransmitter Response Profiles of Dynamic PET data **2017**,		1
30	Image reconstruction using tetrahedral voxels: A list mode implementation for awake animal imaging **2014**,		1
29	GPU-accelerated motion compensated OSEM list-mode PET reconstruction using a time-averaged sensitivity matrix **2013**,		1
28	Calculated attenuation correction for awake small animal brain PET studies **2013**,		1
27	Performance of an analytical positron range modelling approach in the context of whole body small animal and clinical PET **2011**,		1
26	Truncated pinhole SPECT: Sufficient sampling criteria and applications **2010**,		1
25	Refraction-compensated motion tracking of unrestrained animals in PET **2010**,		1
24	Statistical motion modeling of the thorax applied to respiratory gated FDG PET **2010**,		1
23	An investigation of motion tracking for freely moving animals in PET **2010**,		1
22	Understanding and compensating for refraction errors in stereo-optical tracking during small animal PET / SPECT **2009**,		1
21	Compensation for lost events in LOR rebinning motion correction for PET **2009**,		1
20	Deformable image registration by regarding respiratory motion as 1D wave propagation in an elastic medium **2011**,		1
19	Novel SLAM-based markerless motion tracking of conscious unrestrained rodents in PET **2011**,		1
18	BrachyView: A novel in-body imaging system for prostate brachytherapy **2011**,		1
17	Accelerated reconstruction for identifying image regions affected by rigid body movement **2012**,		1
16	The Potential of Tracer Kinetic Studies in Drug Development Programs: A New Investigational Area for Cancer Research. *Drug Information Journal*, **1997**, 31, 1045-1049		1
15	Simultaneous emission and transmission scanning in PET oncology: the effect on parameter estimation. *IEEE Transactions on Nuclear Science*, **1997**, 44, 67-73	1.7	1

List of Publications

14	Impact of Detector Defects on Image Quality and Quantification for the microPET Focus 220 Scanner **2006**,		1
13	Event-by-event motion compensation for small animal PET **2007**,		1
12	Spatial resolution of a small cubic LYSO scintillator crystal detector with depth-of-interaction capabilities in a small animal PET scanner **2007**,		1
11	WE-DE-BRA-06: Evaluation of the Imaging Performance of a Novel Water-Equivalent EPID. *Medical Physics*, **2016**, 43, 3813-3813	4.4	1
10	Preclinical PET and SPECT. *Imaging in Medical Diagnosis and Therapy*, **2017**, 413-438		1
9	ABC in Nuclear Imaging **2018**, 623-647		1
8	Design Considerations of Small-Animal SPECT Cameras **2014**, 135-162		1
7	Parametric Image Reconstruction Using Spectral Analysis of (Rebinned) Three-Dimensional Projection Data 1 1Transcripts of the BRAINPET97 discussion of this chapter can be found in Section VIII. **1998**, 45-50		1
6	Modelling the motion dependent point spread function in motion corrected small animal PET imaging **2016**,		1
5	Performance evaluation of a PET insert for preclinical MRI in stand-alone PET and simultaneous PET-MRI modes. *EJNMMI Physics*, **2021**, 8, 68	4.4	0
4	Cross Population Motion Modeling Applied to Attenuation Correction of Respiratory Gated F18-FDG PET. *IEEE Transactions on Nuclear Science*, **2016**, 63, 170-179	1.7	
3	Exposure (mAs) optimisation of a multi-detector CT protocol for hepatic lesion detection: Are thinner slices better?. *Journal of Medical Imaging and Radiation Oncology*, **2014**, 58, 137-43	1.7	
2	Quarantine MAP reconstruction of PET/CT data using dual priors **2006**, 6142, 1442		
1	A Small-Animal SPECT Imaging System Utilizing Position Tracking of Unanesthetized Mice **2005**, 239-243		