Simon Cherry

List of Publications by Citations

333 papers	22,568 citations	71 h-index	142 g-index
373 ext. papers	25,401 ext. citations	5.1 avg, IF	6.82 L-index

#	Paper	IF	Citations
333	Rapid automated algorithm for aligning and reslicing PET images. *Journal of Computer Assisted Tomography*, **1992**, 16, 620-33	2.2	1324
332	Automated image registration: I. General methods and intrasubject, intramodality validation. *Journal of Computer Assisted Tomography*, **1998**, 22, 139-52	2.2	1302
331	MRI-PET registration with automated algorithm. *Journal of Computer Assisted Tomography*, **1993**, 17, 536-46	2.2	1215
330	A critical role for Dnmt1 and DNA methylation in T cell development, function, and survival. *Immunity*, **2001**, 15, 763-74	32.3	909
329	Simultaneous PET-MRI: a new approach for functional and morphological imaging. *Nature Medicine*, **2008**, 14, 459-65	50.5	829
328	High-resolution 3D Bayesian image reconstruction using the microPET small-animal scanner. *Physics in Medicine and Biology*, **1998**, 43, 1001-13	3.8	473
327	MicroPET: a high resolution PET scanner for imaging small animals. *IEEE Transactions on Nuclear Science*, **1997**, 44, 1161-1166	1.7	465
326	Imaging adenoviral-directed reporter gene expression in living animals with positron emission tomography. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 2333-8	11.5	397
325	Repetitive, non-invasive imaging of the dopamine D2 receptor as a reporter gene in living animals. *Gene Therapy*, **1999**, 6, 785-91	4	329
324	A smart and versatile theranostic nanomedicine platform based on nanoporphyrin. *Nature Communications*, **2014**, 5, 4712	17.4	305
323	Simultaneous PET and MR imaging. *Physics in Medicine and Biology*, **1997**, 42, 1965-70	3.8	303
322	Optical imaging of Cerenkov light generation from positron-emitting radiotracers. *Physics in Medicine and Biology*, **2009**, 54, N355-65	3.8	296
321	Imaging transgene expression with radionuclide imaging technologies. *Neoplasia*, **2000**, 2, 118-38	6.4	272
320	Total-Body PET: Maximizing Sensitivity to Create New Opportunities for Clinical Research and Patient Care. *Journal of Nuclear Medicine*, **2018**, 59, 3-12	8.9	270
319	In vivo molecular and genomic imaging: new challenges for imaging physics. *Physics in Medicine and Biology*, **2004**, 49, R13-48	3.8	265
318	Performance test of an LSO-APD detector in a 7-T MRI scanner for simultaneous PET/MRI. *Journal of Nuclear Medicine*, **2006**, 47, 639-47	8.9	253
317	Simultaneous in vivo positron emission tomography and magnetic resonance imaging. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 3705-10	11.5	250

316	Performance evaluation of the microPET P4: a PET system dedicated to animal imaging. *Physics in Medicine and Biology*, **2001**, 46, 1845-62	3.8	250
315	Retroviral expression in embryonic stem cells and hematopoietic stem cells. *Molecular and Cellular Biology*, **2000**, 20, 7419-26	4.8	237
314	Simultaneous acquisition of multislice PET and MR images: initial results with a MR-compatible PET scanner. *Journal of Nuclear Medicine*, **2006**, 47, 1968-76	8.9	235
313	First Human Imaging Studies with the EXPLORER Total-Body PET Scanner. *Journal of Nuclear Medicine*, **2019**, 60, 299-303	8.9	232
312	Cardiac myocyte-specific excision of the beta1 integrin gene results in myocardial fibrosis and cardiac failure. *Circulation Research*, **2002**, 90, 458-64	15.7	232
311	Hyperspectral and multispectral bioluminescence optical tomography for small animal imaging. *Physics in Medicine and Biology*, **2005**, 50, 5421-41	3.8	226
310	Simple charge division readouts for imaging scintillator arrays using a multi-channel PMT. *IEEE Transactions on Nuclear Science*, **1996**, 43, 1634-1641	1.7	215
309	MicroPET II: design, development and initial performance of an improved microPET scanner for small-animal imaging. *Physics in Medicine and Biology*, **2003**, 48, 1519-37	3.8	211
308	Imaging of adenoviral-directed herpes simplex virus type 1 thymidine kinase reporter gene expression in mice with radiolabeled ganciclovir. *Journal of Nuclear Medicine*, **1998**, 39, 2003-11	8.9	204
307	Quantification of target gene expression by imaging reporter gene expression in living animals. *Nature Medicine*, **2000**, 6, 933-7	50.5	197
306	Performance evaluation of microPET: a high-resolution lutetium oxyorthosilicate PET scanner for animal imaging. *Journal of Nuclear Medicine*, **1999**, 40, 1164-75	8.9	195
305	Fast gradient-based methods for Bayesian reconstruction of transmission and emission PET images. *IEEE Transactions on Medical Imaging*, **1994**, 13, 687-701	11.7	190
304	Use of positron emission tomography in animal research. *ILAR Journal*, **2001**, 42, 219-32	1.7	185
303	Combining anatomy and function: the path to true image fusion. *European Radiology*, **2001**, 11, 1968-74	8	183
302	Bayesian reconstruction of PET images: methodology and performance analysis. *Physics in Medicine and Biology*, **1996**, 41, 1777-807	3.8	175
301	Multimodality imaging: beyond PET/CT and SPECT/CT. *Seminars in Nuclear Medicine*, **2009**, 39, 348-53	5.4	169
300	Multimodality in vivo imaging systems: twice the power or double the trouble?. *Annual Review of Biomedical Engineering*, **2006**, 8, 35-62	12	164
299	Application of silicon photomultipliers to positron emission tomography. *Annals of Biomedical Engineering*, **2011**, 39, 1358-77	4.7	160

298	In vivo imaging of neuronal activation and plasticity in the rat brain by high resolution positron emission tomography (microPET). *Nature Biotechnology*, **2000**, 18, 655-60	44.5	159
297	Development of a PET detector system compatible with MRI/NMR systems. *IEEE Transactions on Nuclear Science*, **1997**, 44, 1167-1171	1.7	149
296	Small-animal X-ray dose from micro-CT. *Molecular Imaging*, **2004**, 3, 149-58	3.7	149
295	PET/MR images acquired with a compact MR-compatible PET detector in a 7-T magnet. *Radiology*, **2007**, 244, 807-14	20.5	148
294	3D PET using a conventional multislice tomograph without septa. *Journal of Computer Assisted Tomography*, **1991**, 15, 655-68	2.2	129
293	The 2006 Henry N. Wagner Lecture: Of mice and men (and positrons)--advances in PET imaging technology. *Journal of Nuclear Medicine*, **2006**, 47, 1735-45	8.9	126
292	Cerenkov luminescence tomography for small-animal imaging. *Optics Letters*, **2010**, 35, 1109-11	3	125
291	Depth of interaction resolution measurements for a high resolution PET detector using position sensitive avalanche photodiodes. *Physics in Medicine and Biology*, **2006**, 51, 2131-42	3.8	125
290	Quantitative assessment of longitudinal metabolic changes in vivo after traumatic brain injury in the adult rat using FDG-microPET. *Journal of Cerebral Blood Flow and Metabolism*, **2000**, 20, 1492-501	7.3	124
289	In vivo Cerenkov luminescence imaging: a new tool for molecular imaging. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2011**, 369, 4605-19	3	122
288	Optimization and performance evaluation of the microPET II scanner for in vivo small-animal imaging. *Physics in Medicine and Biology*, **2004**, 49, 2527-45	3.8	121
287	NaGdF:Eu Nanoparticles for Enhanced X-ray Excited Optical Imaging. *Chemistry of Materials*, **2014**, 26, 1881-1888	9.6	116
286	Depth of interaction calibration for PET detectors with dual-ended readout by PSAPDs. *Physics in Medicine and Biology*, **2009**, 54, 433-45	3.8	116
285	High-resolution PET detector design: modelling components of intrinsic spatial resolution. *Physics in Medicine and Biology*, **2005**, 50, 179-95	3.8	110
284	Small-animal preclinical nuclear medicine instrumentation and methodology. *Seminars in Nuclear Medicine*, **2008**, 38, 209-22	5.4	107
283	Total-body imaging: Transforming the role of positron emission tomography. *Science Translational Medicine*, **2017**, 9,	17.5	106
282	Comparison of 3-D maximum a posteriori and filtered backprojection algorithms for high-resolution animal imaging with microPET. *IEEE Transactions on Medical Imaging*, **2000**, 19, 507-12	11.7	103
281	Fundamentals of positron emission tomography and applications in preclinical drug development. *Journal of Clinical Pharmacology*, **2001**, 41, 482-91	2.9	102

280	Fully 3D Bayesian image reconstruction for the ECAT EXACT HR+. *IEEE Transactions on Nuclear Science*, **1998**, 45, 1096-1103	1.7	101
279	Optimal whole-body PET scanner configurations for different volumes of LSO scintillator: a simulation study. *Physics in Medicine and Biology*, **2012**, 57, 4077-94	3.8	96
278	Seeing is believing: non-invasive, quantitative and repetitive imaging of reporter gene expression in living animals, using positron emission tomography. *Journal of Neuroscience Research*, **2000**, 59, 699-705	4.4	96
277	Development and evaluation of an automated atlas-based image analysis method for microPET studies of the rat brain. *NeuroImage*, **2003**, 20, 2100-18	7.9	95
276	Detector development for microPET II: a 1 microl resolution PET scanner for small animal imaging. *Physics in Medicine and Biology*, **2001**, 46, 2899-910	3.8	95
275	A study of artefacts in simultaneous PET and MR imaging using a prototype MR compatible PET scanner. *Physics in Medicine and Biology*, **1999**, 44, 2015-27	3.8	95
274	Towards in vivo nuclear microscopy: iodine-125 imaging in mice using micro-pinholes. *European Journal of Nuclear Medicine and Molecular Imaging*, **2002**, 29, 933-8	8.8	92
273	A prototype PET scanner with DOI-encoding detectors. *Journal of Nuclear Medicine*, **2008**, 49, 1132-40	8.9	91
272	Design and evaluation of an LSO PET detector for breast cancer imaging. *Medical Physics*, **2000**, 27, 1535-43	4.4	91
271	Initial characterization of a dedicated breast PET/CT scanner during human imaging. *Journal of Nuclear Medicine*, **2009**, 50, 1401-8	8.9	90
270	Attenuation correction using count-limited transmission data in positron emission tomography. *Journal of Nuclear Medicine*, **1993**, 34, 143-50	8.9	85
269	Joint L1 and total variation regularization for fluorescence molecular tomography. *Physics in Medicine and Biology*, **2012**, 57, 1459-76	3.8	82
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261	. *IEEE Transactions on Nuclear Science*, **1995**, 42, 1058-1063	1.7	71
260	Synthesis of 8-[(18)F]fluoroguanine derivatives: in vivo probes for imaging gene expression with positron emission tomography. *Nuclear Medicine and Biology*, **2000**, 27, 157-62	2.1	70
259	PET and NMR dual acquisition (PANDA): applications to isolated, perfused rat hearts. *NMR in Biomedicine*, **1997**, 10, 138-42	4.4	69
258	A Prototype High-Resolution Small-Animal PET Scanner Dedicated to Mouse Brain Imaging. *Journal of Nuclear Medicine*, **2016**, 57, 1130-5	8.9	68
257	Neural correlates of pair-bonding in a monogamous primate. *Brain Research*, **2007**, 1184, 245-53	3.7	67
256	Optical fiber readout of scintillator arrays using a multi-channel PMT: a high resolution PET detector for animal imaging. *IEEE Transactions on Nuclear Science*, **1996**, 43, 1932-1937	1.7	66
255	Experimental characterization and system simulations of depth of interaction PET detectors using 0.5 mm and 0.7 mm LSO arrays. *Physics in Medicine and Biology*, **2009**, 54, 4605-19	3.8	63
254	A three-dimensional multispectral fluorescence optical tomography imaging system for small animals based on a conical mirror design. *Optics Express*, **2009**, 17, 7571-85	3.3	63
253	Performance measurements of a depth-encoding PET detector module based on position-sensitive avalanche photodiode read-out. *Physics in Medicine and Biology*, **2004**, 49, 4293-304	3.8	63
252	Design features and performance of a PET system for animal research. *Journal of Nuclear Medicine*, **1992**, 33, 595-604	8.9	61
251	Lutetium oxyorthosilicate block detector readout by avalanche photodiode arrays for high resolution animal PET. *Physics in Medicine and Biology*, **2004**, 49, 4305-19	3.8	60
250	Design of a small animal MR compatible PET scanner. *IEEE Transactions on Nuclear Science*, **1999**, 46, 565-570	1.7	60
249	Chromatin remodeling directly activates V(D)J recombination. *Proceedings of the National Academy of Sciences of the United States of America*, **1999**, 96, 10788-93	11.5	60
248	A microPET/CT system for in vivo small animal imaging. *Physics in Medicine and Biology*, **2007**, 52, 3881-94	3.8	59
247	Design and development of an MR-compatible PET scanner for imaging small animals. *IEEE Transactions on Nuclear Science*, **2005**, 52, 1376-1380	1.7	59
246	Radiofluorinated L-m-tyrosines: new in-vivo probes for central dopamine biochemistry. *Journal of Cerebral Blood Flow and Metabolism*, **1996**, 16, 667-78	7.3	59
245	Total-Body Dynamic Reconstruction and Parametric Imaging on the uEXPLORER. *Journal of Nuclear Medicine*, **2020**, 61, 285-291	8.9	59

244	The Integration of Positron Emission Tomography With Magnetic Resonance Imaging. *Proceedings of the IEEE*, **2008**, 96, 416-438	14.3	58
243	Quantitative image reconstruction for total-body PET imaging using the 2-meter long EXPLORER scanner. *Physics in Medicine and Biology*, **2017**, 62, 2465-2485	3.8	57
242	Continuous depth-of-interaction encoding using phosphor-coated scintillators. *Physics in Medicine and Biology*, **2009**, 54, 1757-71	3.8	57
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240	Innovations in Instrumentation for Positron Emission Tomography. *Seminars in Nuclear Medicine*, **2018**, 48, 311-331	5.4	56
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237	. *IEEE Transactions on Nuclear Science*, **1995**, 42, 1064-1068	1.7	55
236	X-ray luminescence optical tomography imaging: experimental studies. *Optics Letters*, **2013**, 38, 2339-41	3	54
235	Noninvasive measurement of myocardial activity concentrations and perfusion defect sizes in rats with a new small-animal positron emission tomograph. *Circulation*, **2002**, 106, 118-23	16.7	52
234	maxPET, a dedicated mammary and axillary region PET imaging system for breast cancer. *IEEE Transactions on Nuclear Science*, **2001**, 48, 811-815	1.7	51
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232	Computed Cerenkov luminescence yields for radionuclides used in biology and medicine. *Physics in Medicine and Biology*, **2015**, 60, 4263-80	3.8	50
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230	Fabrication and characterization of a 0.5-mm lutetium oxyorthosilicate detector array for high-resolution PET applications. *Journal of Nuclear Medicine*, **2007**, 48, 115-21	8.9	50
229	In vivo positron-emission tomography imaging of progression and transformation in a mouse model of mammary neoplasia. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 11438-43	11.5	49
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227	Bismuth germanate coupled to near ultraviolet silicon photomultipliers for time-of-flight PET. *Physics in Medicine and Biology*, **2016**, 61, L38-L47	3.8	49

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221	The performance of a multiwire proportional chamber positron camera for clinical use. *Physics in Medicine and Biology*, **1989**, 34, 1043-62	3.8	45
220	Noninvasive determination of myocardial blood flow, oxygen consumption and efficiency in normal humans by carbon-11 acetate positron emission tomography imaging. *European Journal of Nuclear Medicine and Molecular Imaging*, **1999**, 26, 1465-74	8.8	44
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215	Simultaneous PET and multispectral 3-dimensional fluorescence optical tomography imaging system. *Journal of Nuclear Medicine*, **2011**, 52, 1268-75	8.9	40
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203	Using convolutional neural networks to estimate time-of-flight from PET detector waveforms. *Physics in Medicine and Biology*, **2018**, 63, 02LT01	3.8	37
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