

Mats Danielsson

List of Publications by Year in descending order

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112
papers

2,281
citations

218677

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116
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116
docs citations

116
times ranked

1350
citing authors

#	ARTICLE	IF	CITATIONS
1	Compton coincidence in silicon photon-counting CT detectors. Journal of Medical Imaging, 2022, 9, 013501.	1.5	3
2	Science and practice of imaging physics through 50 years of SPIE Medical Imaging conferences. Journal of Medical Imaging, 2022, 9, 012205.	1.5	2
3	Photon-counting x-ray detectors for CT. Physics in Medicine and Biology, 2021, 66, 03TR01.	3.0	104
4	1- $\frac{1}{4}$ m spatial resolution in silicon photon-counting CT detectors. Journal of Medical Imaging, 2021, 8, 063501.	1.5	5
5	Robustness of optimal energy thresholds in photon-counting spectral CT. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 953, 163132.	1.6	8
6	Feasibility of unconstrained three-material decomposition: imaging an excised human heart using a prototype silicon photon-counting CT detector. European Radiology, 2020, 30, 5904-5912.	4.5	14
7	Silicon photon-counting detector for full-field CT using an ASIC with adjustable shaping time. Journal of Medical Imaging, 2020, 7, 053503.	1.5	8
8	A stacked prism lens concept for next-generation hard X-ray telescopes. Nature Astronomy, 2019, 3, 867-872.	10.1	7
9	Resolution characterization of a silicon-based, photon-counting computed tomography prototype capable of patient scanning. Journal of Medical Imaging, 2019, 6, 1.	1.5	30
10	Increased count-rate performance and dose efficiency for silicon photon-counting detectors for full-field CT using an ASIC with adjustable shaping time. , 2019, , .		3
11	Modeling charge transport in photon-counting detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 899, 115-121.	1.6	4
12	Count statistics of nonparalyzable photon-counting detectors with nonzero pulse length. Medical Physics, 2018, 45, 3800-3811.	3.0	5
13	Applying three different methods of measuring CTDI free air to the extended CTDI formalism for wide-beam scanners (IEC 60601-2-44): A comparative study. Journal of Applied Clinical Medical Physics, 2018, 19, 281-289.	1.9	6
14	Subpixel x-ray imaging with an energy-resolving detector. Journal of Medical Imaging, 2018, 5, 1.	1.5	3
15	Count statistics and pileup correction for nonparalyzable photon counting detectors with finite pulse length. , 2018, , .		1
16	Increasing the dose efficiency in silicon photon-counting detectors utilizing dual shapers. , 2018, , .		1
17	Resolution improvement in x-ray imaging with an energy-resolving detector. , 2017, , .		1
18	Lesion characterization in spectral photon-counting tomosynthesis. , 2017, , .		0

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19	Compression of CT sinogram data by decimation in the view direction. Medical Physics, 2017, 44, e138-e146.	3.0	2
20	Angular oversampling with temporally offset layers on multilayer detectors in computed tomography. Medical Physics, 2016, 43, 2877-2883.	3.0	0
21	Size-dependent scanning parameters (kVp and mAs) for photon-counting spectral CT system in pediatric imaging: simulation study. Physics in Medicine and Biology, 2016, 61, 4105-4126.	3.0	10
22	A method for geometric calibration of edge detectors in a CT gantry. Medical Physics, 2016, 43, 6165-6174.	3.0	2
23	Upper limits of the photon fluence rate on CT detectors: Case study on a commercial scanner. Medical Physics, 2016, 43, 4398-4411.	3.0	32
24	Rayleigh imaging in spectral mammography. , 2016, , .		0
25	Fabrication of circular sawtooth gratings using focused UV lithography. Journal of Micromechanics and Microengineering, 2016, 26, 035001.	2.6	3
26	Measurement of breast-tissue x-ray attenuation by spectral mammography: solid lesions. Physics in Medicine and Biology, 2016, 61, 2595-2612.	3.0	16
27	On image quality metrics and the usefulness of grids in digital mammography. Journal of Medical Imaging, 2015, 2, 013501.	1.5	6
28	Modelling the channel-wise count response of a photon-counting spectral CT detector to a broad x-ray spectrum. , 2015, , .		0
29	Spectral response model for a multibin photon-counting spectral computed tomography detector and its applications. Journal of Medical Imaging, 2015, 2, 033502.	1.5	15
30	Light output measurements and computational models of microcolumnar CsI scintillators for x-ray imaging. Medical Physics, 2015, 42, 600-605.	3.0	19
31	Energy Calibration of a Silicon-Strip Detector for Photon-Counting Spectral CT by Direct Usage of the X-ray Tube Spectrum. IEEE Transactions on Nuclear Science, 2015, 62, 68-75.	2.0	11
32	Theoretical Comparison of a Dual Energy System and Photon Counting Silicon Detector Used for Material Quantification in Spectral CT. IEEE Transactions on Medical Imaging, 2015, 34, 796-806.	8.9	19
33	Allowable Forward Model Misspecification for Accurate Basis Decomposition in a Silicon Detector Based Spectral CT. IEEE Transactions on Medical Imaging, 2015, 34, 788-795.	8.9	9
34	Optimization of beam quality for photon-counting spectral computed tomography in head imaging: simulation study. Journal of Medical Imaging, 2015, 2, 043504.	1.5	16
35	Energy-resolved CT imaging with a photon-counting silicon-strip detector. Physics in Medicine and Biology, 2014, 59, 6709-6727.	3.0	89
36	Energy-resolved CT imaging with a photon-counting silicon-strip detector. Proceedings of SPIE, 2014, , .	0.8	0

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37	Utilization of in-depth photon counting detectors towards x-ray spectral imaging: The benefits from the depth information. , 2014, , .		2
38	On imaging with or without grid in digital mammography. Proceedings of SPIE, 2014, , .	0.8	1
39	Necessary forward model specification accuracy for basis material decomposition in spectral CT. , 2014, , .		2
40	Introduction to Volume 8: Radiation Sources and Detectors. , 2014, , xiii-xiv.		0
41	Improved signal-to-noise ratio for non-perpendicular detection angles in x-ray fluorescence computed tomography (XFCT). Physics in Medicine and Biology, 2014, 59, 6507-6520.	3.0	13
42	A Silicon-Strip Detector for Photon-Counting Spectral CT: Energy Resolution From 40ÅkeV to 120ÅkeV. IEEE Transactions on Nuclear Science, 2014, 61, 1099-1105.	2.0	25
43	A photon-counting silicon-strip detector for digital mammography with an ultrafast 0.18-Î¼m CMOS ASIC. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 749, 1-6.	1.6	6
44	Characterization of a silicon strip detector for photon-counting spectral CT using monoenergetic photons from 40 keV to 120 keV. Proceedings of SPIE, 2014, , .	0.8	0
45	Use of depth information from in-depth photon counting detectors for x-ray spectral imaging: a preliminary simulation study. Proceedings of SPIE, 2014, , .	0.8	0
46	A Stress Update Algorithm for Constitutive Models of Glassy Polymers. International Journal for Computational Methods in Engineering Science and Mechanics, 2013, 14, 336-342.	2.1	2
47	Evaluation of a Second-Generation Ultra-Fast Energy-Resolved ASIC for Photon-Counting Spectral CT. IEEE Transactions on Nuclear Science, 2013, 60, 437-445.	2.0	45
48	Effect of Temperature Variation on the Energy Response of a Photon Counting Silicon CT Detector. IEEE Transactions on Nuclear Science, 2013, 60, 1442-1449.	2.0	9
49	Energy resolution of a segmented silicon strip detector for photon-counting spectral CT. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 715, 11-17.	1.6	30
50	Mass detection in reconstructed digital breast tomosynthesis volumes with a computer-aided detection system trained on 2D mammograms. Medical Physics, 2013, 40, 041902.	3.0	37
51	Eliminated risk of iodine contrast cancellation with multibin spectral CT. Physics in Medicine and Biology, 2013, 58, N201-N209.	3.0	2
52	Two-View and Single-View Tomosynthesis versus Full-Field Digital Mammography: High-Resolution X-Ray Imaging Observer Study. Radiology, 2012, 262, 788-796.	7.3	173
53	Performance evaluation of a sub-millimetre spectrally resolved CT system on high- and low-frequency imaging tasks: a simulation. Physics in Medicine and Biology, 2012, 57, 2373-2391.	3.0	21
54	Evaluation of an ultra-fast photon-counting energy-resolved ASIC for spectral CT. Proceedings of SPIE, 2012, , .	0.8	1

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55	Quantification of ring artifact visibility in CT. Proceedings of SPIE, 2012, , .	0.8	2
56	Task based weights for spectral computed tomography. , 2012, , .		2
57	Simulation of HyperSPECT: a high-resolution small-animal system with in-line x-ray optics. Physics in Medicine and Biology, 2012, 57, 1617-1629.	3.0	3
58	Ideal observer detectability in photon-counting differential phase-contrast imaging using a linear systems approach. Medical Physics, 2012, 39, 5317-5335.	3.0	8
59	Preliminary evaluation of a silicon strip detector for photon-counting spectral CT. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 677, 45-51.	1.6	43
60	Large-aperture focusing of high-energy x rays with a rolled polyimide film. Optics Letters, 2011, 36, 555.	3.3	9
61	Validity of spherical approximations of initial charge cloud shape in silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 648, S190-S193.	1.6	8
62	Development of Low-Dose Photon-counting Contrast-enhanced Tomosynthesis with Spectral Imaging. Radiology, 2011, 259, 558-564.	7.3	37
63	Evaluation of Energy Loss and Charge Sharing in Cadmium Telluride Detectors for Photon-Counting Computed Tomography. IEEE Transactions on Nuclear Science, 2011, 58, 614-625.	2.0	76
64	Performance characterization of a silicon strip detector for spectral computed tomography utilizing a laser testing system. , 2011, , .		11
65	Evaluation of photon-counting spectral breast tomosynthesis. , 2011, , .		4
66	Theoretical Bounds and System Design for Multipinhole SPECT. IEEE Transactions on Medical Imaging, 2010, 29, 1390-1400.	8.9	29
67	Energy resolution of a photon-counting silicon strip detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 613, 156-162.	1.6	90
68	Design considerations to overcome cross talk in a photon counting silicon strip detector for computed tomography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 621, 371-378.	1.6	24
69	Detectors for the future of X-ray imaging. Radiation Protection Dosimetry, 2010, 139, 327-333.	0.8	39
70	Energy filtering with X-ray lenses: optimization for photon-counting mammography. Radiation Protection Dosimetry, 2010, 139, 339-342.	0.8	0
71	Observer model optimization of a spectral mammography system. Proceedings of SPIE, 2010, , .	0.8	11
72	Simulation study of an energy sensitive photon counting silicon strip detector for computed tomography: identifying strengths and weaknesses and developing work-arounds. Proceedings of SPIE, 2010, , .	0.8	4

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73	Contrast-enhanced spectral mammography with a photon-counting detector. Medical Physics, 2010, 37, 2017-2029.	3.0	84
74	Photon-counting spectral computed tomography using silicon strip detectors: a feasibility study. Physics in Medicine and Biology, 2010, 55, 1999-2022.	3.0	153
75	A low-absorption x-ray energy filter for small-scale applications. Optics Express, 2009, 17, 11388.	3.4	4
76	Photon-counting CT with silicon detectors: feasibility for pediatric imaging. Proceedings of SPIE, 2009, , .	0.8	10
77	HyperSPECT: a new system for pre-clinical imaging in vivo. Proceedings of SPIE, 2009, , .	0.8	1
78	An efficient pre-object collimator based on an x-ray lens. Medical Physics, 2009, 36, 626-633.	3.0	2
79	Imaging of small children with a prototype for photon counting tomosynthesis. , 2009, , .		1
80	A photon-counting detector for dual-energy breast tomosynthesis. Proceedings of SPIE, 2009, , .	0.8	16
81	Feasibility study for photon counting detector for high resolution pre clinical SPECT. , 2008, , .		0
82	Imaging with multi-prism x-ray lenses. Proceedings of SPIE, 2008, , .	0.8	0
83	Contrast-enhanced dual-energy subtraction imaging using electronic spectrum-splitting and multi-prism x-ray lenses. Proceedings of SPIE, 2008, , .	0.8	2
84	Theoretical bounds and optimal configurations for multi-pinhole SPECT. , 2008, , .		2
85	A Tunable Energy Filter for Medical X-Ray Imaging. X-Ray Optics and Instrumentation, 2008, 2008, 1-8.	0.7	5
86	Prism-array lenses for energy filtering in medical x-ray imaging. , 2007, , .		0
87	Physical characterization of a scanning photon counting digital mammography system based on Si-strip detectors. Medical Physics, 2007, 34, 1918-1925.	3.0	86
88	Spectral shaping for photon counting digital mammography. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 580, 1046-1049.	1.6	3
89	Micromechanics, macromechanics and constitutive modeling of the elasto-viscoplastic deformation of rubber-toughened glassy polymers. Journal of the Mechanics and Physics of Solids, 2007, 55, 533-561.	4.8	54
90	Scatter rejection in multislit digital mammography. Medical Physics, 2006, 33, 933-940.	3.0	81

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91	Single-shot dual-energy subtraction mammography with electronic spectrum splitting: Feasibility. European Journal of Radiology, 2006, 60, 275-278.	2.6	38
92	Optimization of operating conditions in photon-counting multi-slit mammography based on Si-strip detectors. , 2006, 6142, 79.		5
93	Optimized AEC for scanning digital mammography based on local variation of scan velocity. , 2005, , .		3
94	AEC for scanning digital mammography based on variation of scan velocity. Medical Physics, 2005, 32, 3367-3374.	3.0	13
95	Scatter rejection in scanned multislit digital mammography. , 2004, 5368, 478.		9
96	Study of capillary-based gaseous detectors. IEEE Transactions on Nuclear Science, 2004, 51, 952-959.	2.0	5
97	Physics at CPLEAR. Physics Reports, 2003, 374, 165-270.	25.6	40
98	Study of hole-type gas multiplication structures for portal imaging and other high count rate applications. IEEE Transactions on Nuclear Science, 2003, 50, 809-819.	2.0	50
99	Measurements on a full-field digital mammography system with a photon counting crystalline silicon detector. , 2003, 5030, 547.		20
100	Sporadic electron jets from cathodes the main breakdown-triggering mechanism in gaseous detectors. IEEE Transactions on Nuclear Science, 2002, 49, 1622-1628.	2.0	17
101	Evaluation of a photon-counting X-ray imaging system. IEEE Transactions on Nuclear Science, 2001, 48, 1530-1536.	2.0	69
102	<title>Refractive beryllium x-ray lens with variable focal length</title>. , 2001, , .		6
103	Focusing hard X-rays with old LPs. Nature, 2000, 404, 951-951.	27.8	58
104	Computer simulations and performance measurements on a silicon strip detector for edge-on imaging. IEEE Transactions on Nuclear Science, 2000, 47, 1487-1492.	2.0	20
105	Detective quantum efficiency dependence on x-ray energy weighting in mammography. Medical Physics, 1999, 26, 2680-2683.	3.0	121
106	High-resolution X-ray imaging using the signal time dependence on a double-sided silicon detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 423, 135-145.	1.6	2
107	Direct determination of two-pion correlations for $pp \rightarrow \pi^+ \pi^0$ annihilation at rest. European Physical Journal C, 1998, 1, 139-148.	3.9	1
108	High resolution X-ray imaging using a silicon strip detector. IEEE Transactions on Nuclear Science, 1998, 45, 3059-3063.	2.0	46

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109	High-resolution scanned-slit x-ray imaging using a refractive lens for x-ray focusing. , 1998, , .		5
110	High Resolution Mammography Using a Scanned Slit Silicon Strip Detector. Computational Imaging and Vision, 1998, , 27-30.	0.6	1
111	A straightforward exercise demonstrating Heisenberg's uncertainty principle. European Journal of Physics, 1995, 16, 97-100.	0.6	1
112	Predissociation effects in the A ² and B ² states of CD. Journal of Chemical Physics, 1993, 98, 9405-9409.	0.4	22