Katsuyuki Taguchi

List of Publications by Year
in descending order

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74 papers	3,110 citations	257101 24 h-index	161609 54 g-index
78 all docs	78 docs citations	78 times ranked	2087 citing authors

#	Article	IF	Citations
1	Vision 20/20: Single photon counting xâ€ray detectors in medical imaging. Medical Physics, 2013, 40, 100901.	1.6	706
2	Algorithm for image reconstruction in multi-slice helical CT. Medical Physics, 1998, 25, 550-561.	1.6	252
3	Achieving Routine Submillisievert CT Scanning: Report from the Summit on Management of Radiation Dose in CT. Radiology, 2012, 264, 567-580.	3.6	246
4	An analytical model of the effects of pulse pileup on the energy spectrum recorded by energy resolved photon counting xâ€ray detectors. Medical Physics, 2010, 37, 3957-3969.	1.6	206
5	Material separation in xâ€ray CT with energy resolved photonâ€counting detectors. Medical Physics, 2011, 38, 1534-1546.	1.6	168
6	Modeling the performance of a photon counting xâ€ray detector for CT: Energy response and pulse pileup effects. Medical Physics, 2011, 38, 1089-1102.	1.6	131
7	Combination of a Low-Tube-Voltage Technique With Hybrid Iterative Reconstruction (iDose) Algorithm at Coronary Computed Tomographic Angiography. Journal of Computer Assisted Tomography, 2011, 35, 480-485.	0.5	116
8	High temporal resolution for multislice helical computed tomography. Medical Physics, 2000, 27, 861-872.	1.6	107
9	Temporal resolution and the evaluation of candidate algorithms for four-dimensional CT. Medical Physics, 2003, 30, 640-650.	1.6	78
10	Characterization of a novel photon counting detector for clinical CT: count rate, energy resolution, and noise performance. Proceedings of SPIE, 2009, , .	0.8	67
11	Energy-sensitive photon counting detector-based X-ray computed tomography. Radiological Physics and Technology, 2017, 10, 8-22.	1.0	66
12	A cascaded model of spectral distortions due to spectral response effects and pulse pileup effects in a photonâ€counting xâ€ray detector for CT. Medical Physics, 2014, 41, 041905.	1.6	61
13	Spatioâ€energetic crossâ€talk in photon counting detectors: Numerical detector model (Pc<scp>TK</scp>) and workflow for <scp>CT</scp> image quality assessment. Medical Physics, 2018, 45, 1985-1998.	1.6	51
14	A fully four-dimensional, iterative motion estimation and compensation method for cardiac CT. Medical Physics, 2012, 39, 4291-4305.	1.6	49
15	Feldkamp-based cone-beam reconstruction for gantry-tilted helical multislice CT. Medical Physics, 2003, 30, 3233-3242.	1.6	43
16	Differentiation of Kidney Stones Using Dual-Energy CT With and Without a Tin Filter. American Journal of Roentgenology, 2012, 198, 1380-1386.	1.0	43
17	A newly-developed metal artifact reduction algorithm improves the visibility of oral cavity lesions on 320-MDCT volume scans. Physica Medica, 2015, 31, 66-71.	0.4	40
18	Spatioâ€energetic cross talk in photon counting detectors: Detector model and correlated Poisson data generator. Medical Physics, 2016, 43, 6386-6404.	1.6	40

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19	A new weighting scheme for cone-beam helical CT to reduce the image noise. Physics in Medicine and Biology, 2004, 49, 2351-2364.	1.6	37
20	Statistical Projection Completion in X-ray CT Using Consistency Conditions. IEEE Transactions on Medical Imaging, 2010, 29, 1528-1540.	5.4	35
21	Enabling photon counting clinical X-ray CT. , 2009, , .		30
22	Direct cone-beam cardiac reconstruction algorithm with cardiac banding artifact correction. Medical Physics, 2006, 33, 521-539.	1.6	29
23	Image quality assessment of an iterative reconstruction algorithm applied to abdominal CT imaging. Physica Medica, 2014, 30, 527-534.	0.4	27
24	Evaluating tumors in transcatheter arterial chemoembolization (TACE) using dual-phase cone-beam CT. Minimally Invasive Therapy and Allied Technologies, 2011, 20, 276-281.	0.6	25
25	Image quality characteristics for virtual monoenergetic images using dual-layer spectral detector CT: Comparison with conventional tube-voltage images. Physica Medica, 2018, 49, 5-10.	0.4	25
26	Interior regionâ€•ofâ€•interest reconstruction using a small, nearly piecewise constant subregion. Medical Physics, 2011, 38, 1307-1312.	1.6	24
27	Coronary Artery Stent Evaluation by Combining Iterative Reconstruction and High-resolution Kernel at Coronary CT Angiography. Academic Radiology, 2012, 19, 1324-1331.	1.3	24
28	Motion Compensated Fan-Beam Reconstruction for Nonrigid Transformation. IEEE Transactions on Medical Imaging, 2008, 27, 907-917.	5.4	21
29	Estimation of Basis Line-Integrals in a Spectral Distortion-Modeled Photon Counting Detector Using Low-Rank Approximation-Based X-Ray Transmittance Modeling: K-Edge Imaging Application. IEEE Transactions on Medical Imaging, 2017, 36, 2389-2403.	5.4	19
30	â€œX-Map 2.0â€•for Edema Signal Enhancement for Acute Ischemic Stroke Using Nonâ€“Contrast-Enhanced Dual-Energy Computed Tomography. Investigative Radiology, 2018, 53, 432-439.	3.5	19
31	Multiâ€energy interâ€pixel coincidence counters for charge sharing correction and compensation in photon counting detectors. Medical Physics, 2020, 47, 2085-2098.	1.6	18
32	Estimation of Basis Line-Integrals in a Spectral Distortion-Modeled Photon Counting Detector Using Low-Order Polynomial Approximation of X-ray Transmittance. IEEE Transactions on Medical Imaging, 2017, 36, 560-573.	5.4	17
33	Spectral, Photon Counting Computed Tomography. , 0, , .		17
34	Formulation of four katsevich algorithms in native geometry. IEEE Transactions on Medical Imaging, 2006, 25, 855-868.	5.4	16
35	Helical cone beam CT with an asymmetrical detector. Medical Physics, 2005, 32, 3117-3127.	1.6	15
36	Image Noise and Radiation Dose Using an Automatic Tube Current Modulation Technique at 64-Detector Computed Tomography. Journal of Computer Assisted Tomography, 2009, 33, 973-977.	0.5	14

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37	Joint estimation of tissue types and linear attenuation coefficients for photon counting CT. Medical Physics, 2015, 42, 5329-5341.	1.6	14
38	Spatioâ€energetic crossâ€talk in photon counting detectors: N ÂÃ—Â N binning and subâ€pixel masking. Medical Physics, 2018, 45, 4822-4843.	1.6	14
39	Spectral response compensation for photon-counting clinical x-ray CT using sinogram restoration. Proceedings of SPIE, 2012, , .	0.8	13
40	Improved Estimation of Coronary Plaque and Luminal Attenuation Using a Vendor-specific Model-based Iterative Reconstruction Algorithm in Contrast-enhanced CT Coronary Angiography. Academic Radiology, 2017, 24, 1070-1078.	1.3	13
41	XCAT/DRASIM: a realistic CT/human-model simulation package. , 2011, , .		12
42	Evaluation of models of spectral distortions in photon-counting detectors for computed tomography. Journal of Medical Imaging, 2016, 3, 023503.	0.8	12
43	Automatic exposure control at single- and dual-heartbeat CTCA on a 320-MDCT volume scanner: Effect of heart rate, exposure phase window setting, and reconstruction algorithm. Physica Medica, 2014, 30, 385-390.	0.4	11
44	The cause of the artifact in 4-slice helical computed tomography. Medical Physics, 2004, 31, 2033-2037.	1.6	10
45	Cone-Beam Technique for 64-MDCT of Lung: Image Quality Comparison with Stepwise (Step-and-Shoot) Technique. American Journal of Roentgenology, 2009, 192, 273-278.	1.0	9
46	Regional function analysis of left atrial appendage using motion estimation CT and risk of stroke in patients with atrial fibrillation. European Heart Journal Cardiovascular Imaging, 2016, 17, 788-796.	0.5	9
47	Modelâ€based pulse pileup and charge sharing compensation for photon counting detectors: A simulation study. Medical Physics, 2022, 49, 5038-5051.	1.6	9
48	Toward Time Resolved Cardiac CT Images with Patient Dose Reduction: Image-based Motion Estimation. , 2006, , .		8
49	Quantitative Measurement of Iodine Concentration in the Liver Using Abdominal C-Arm Computed Tomography. Academic Radiology, 2009, 16, 200-208.	1.3	8
50	Dose profiles for lung and breast regions at prospective and retrospective CT coronary angiography using optically stimulated luminescence dosimeters on a 64-detector CT scanner. Physica Medica, 2012, 28, 76-82.	0.4	8
51	Photon Counting Detector Computed Tomography. IEEE Transactions on Radiation and Plasma Medical Sciences, 2022, 6, 1-4.	2.7	8
52	Pulse pileup statistics for energy sensitive photon counting detectors with pulse height analysis. Proceedings of SPIE, 2012, , .	0.8	7
53	Assessment of Multienergy Interpixel Coincidence Counters (MEICC) for Charge Sharing Correction or Compensation for Photon Counting Detectors With Boxcar Signals. IEEE Transactions on Radiation and Plasma Medical Sciences, 2021, 5, 465-475.	2.7	7
54	Quantitative Assessment of Atrial Regional Function Using Motion Estimation Computed Tomography. Journal of Computer Assisted Tomography, 2014, 38, 773-778.	0.5	6

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55	Spatio-energetic cross-talk in photon counting detectors: NÃ—N binning and sub-pixel masking. , 2018, , .		6
56	Uniformity correction in photon-counting X-ray detector based on basis material decomposition. , 2008, , .		5
57	A new redundancy weighting scheme for nonstationary data for computed tomography. Medical Physics, 2015, 42, 2659-2667.	1.6	5
58	Vectors through a cross-sectional image (VCI): A visualization method for four-dimensional motion analysis for cardiac computed tomography. Journal of Cardiovascular Computed Tomography, 2017, 11, 468-473.	0.7	5
59	Motion estimation for cardiac functional analysis using two xâ€ray computed tomography scans. Medical Physics, 2017, 44, 4677-4686.	1.6	5
60	X-Ray Transmittance Modeling-Based Material Decomposition Using a Photon-Counting Detector CT System. IEEE Transactions on Radiation and Plasma Medical Sciences, 2021, 5, 508-516.	2.7	5
61	Assessment of multiâ€energy interâ€pixel coincidence counters for photonâ€counting detectors at the presence of charge sharing and pulse pileup: A simulation study. Medical Physics, 2021, 48, 4909-4925.	1.6	4
62	Photon-counting CT: modeling and compensating of spectral distortion effects. Proceedings of SPIE, 2015, , .	0.8	2
63	Simultaneous achievement of accurate CT number and image quality improvement for myocardial perfusion CT at 320-MDCT volume scanning. Physica Medica, 2015, 31, 702-707.	0.4	2
64	Projection-based motion estimation for cardiac functional analysis with high temporal resolution: a proof-of-concept study with digital phantom experiment. Proceedings of SPIE, 2017, , .	0.8	2
65	Threeâ€dimensional regionsâ€ofâ€interestâ€“based intraâ€operative fourâ€dimensional soft tissue perfusion imaging using a standard xâ€ray system with no gantry rotation: A simulation study for a proof of concept. Medical Physics, 2020, 47, 6087-6102.	1.6	2
66	Toward region-of-interest (ROI)-based 4-D perfusion using angiography system. , 2008, , .		1
67	Banding artifact reduction for cardiac CT. , 2008, , .		1
68	Artifacts in Cardiac Computed Tomographic Images. Journal of the American College of Radiology, 2009, 6, 590-593.	0.9	1
69	Four-dimensional non-rigid cardiac motion estimation. Proceedings of SPIE, 2012, , .	0.8	1
70	Spatio-energetic cross-talks in photon counting detectors: detector model and correlated Poisson data generator. , 2016, , .		1
71	Spatio-energetic cross-talk in photon counting detectors: numerical detector model (PcTK) and workflow for CT image quality assessment. , 2018, , .		1
72	A fully four-dimensional iterative motion estimation and compensation method for cardiac CT. , 2012, , .		0

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73	Photon Counting Detector Simulator. , 2020, , 345-352.		0
74	Theoretical comparison and optimization of CdTe and GaAs photon-counting detectors for contrast-enhanced spectral mammography. , 2022, , .		0