Miles N Wernick

List of Publications by Year
in descending order

135 papers	4,124 citations	126907 33 h-index	123424 61 g-index
135 all docs	135 docs citations	135 times ranked	3569 citing authors

#	Article	IF	Citations
1	A support vector machine approach for detection of microcalcifications. IEEE Transactions on Medical Imaging, 2002, 21, 1552-1563.	8.9	475
2	SPATIAL RELATIONSHIPS IN EARLY SIGNALING EVENTS OF FLOW-MEDIATED ENDOTHELIAL MECHANOTRANSDUCTION. Annual Review of Physiology, 1997, 59, 527-549.	13.1	293
3	Machine Learning in Medical Imaging. IEEE Signal Processing Magazine, 2010, 27, 25-38.	5.6	260
4	A Similarity Learning Approach to Content-Based Image Retrieval: Application to Digital Mammography. IEEE Transactions on Medical Imaging, 2004, 23, 1233-1244.	8.9	243
5	Multiple-image radiography. Physics in Medicine and Biology, 2003, 48, 3875-3895.	3.0	219
6	Relevance vector machine for automatic detection of clustered microcalcifications. IEEE Transactions on Medical Imaging, 2005, 24, 1278-1285.	8.9	127
7	Extraction of extinction, refraction and absorption properties in diffraction enhanced imaging. Journal Physics D: Applied Physics, 2003, 36, 2152-2156.	2.8	122
8	Preliminary assessment of extrastriatal dopamine d-2 receptor binding in the rodent and nonhuman primate brains using the high affinity radioligand, 18F-fallypride. Nuclear Medicine and Biology, 1999, 26, 519-527.	0.6	119
9	Prostate Cancer Segmentation With Simultaneous Estimation of Markov Random Field Parameters and Class. IEEE Transactions on Medical Imaging, 2009, 28, 906-915.	8.9	113
10	Prostate Cancer Localization With Multispectral MRI Using Cost-Sensitive Support Vector Machines and Conditional Random Fields. IEEE Transactions on Image Processing, 2010, 19, 2444-2455.	9.8	112
11	Supervised and unsupervised methods for prostate cancer segmentation with multispectral MRI. Medical Physics, 2010, 37, 1873-1883.	3.0	109
12	Fast spatio-temporal image reconstruction for dynamic PET. IEEE Transactions on Medical Imaging, 1999, 18, 185-195.	8.9	108
13	A physical model of multiple-image radiography. Physics in Medicine and Biology, 2006, 51, 221-236.	3.0	91
14	PET Imaging of Tau Pathology and Relationship to Amyloid, Longitudinal MRI, and Cognitive Change in Down Syndrome: Results from the Down Syndrome Biomarker Initiative (DSBI). Journal of Alzheimer's Disease, 2017, 60, 439-450.	2.6	80
15	Tomographic Image Reconstruction Based on a Content-Adaptive Mesh Model. IEEE Transactions on Medical Imaging, 2004, 23, 202-212.	8.9	71
16	A fast approach for accurate content-adaptive mesh generation. IEEE Transactions on Image Processing, 2003, 12, 866-881.	9.8	66
17	FDG PET Parkinsonâ€™s disease-related pattern as a biomarker for clinical trials in early stage disease. NeuroImage: Clinical, 2018, 20, 572-579.	2.7	60
18	Optimization of iterative reconstructions of /sup 99m/Tc cardiac SPECT studies using numerical observers. IEEE Transactions on Nuclear Science, 2002, 49, 2355-2360.	2.0	59

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19	Improving Diagnostic Accuracy in Low-Dose SPECT Myocardial Perfusion Imaging With Convolutional Denoising Networks. IEEE Transactions on Medical Imaging, 2020, 39, 2893-2903.	8.9	59
20	Prediction of cardiac death after adenosine myocardial perfusion SPECT based on machine learning. Journal of Nuclear Cardiology, 2019, 26, 1746-1754.	2.1	57
21	A computed tomography implementation of multiple-image radiography. Medical Physics, 2006, 33, 278-289.	3.0	55
22	An extended diffraction-enhanced imaging method for implementing multiple-image radiography. Physics in Medicine and Biology, 2007, 52, 1923-1945.	3.0	55
23	A computational model to generate simulated threeâ€dimensional breast masses. Medical Physics, 2015, 42, 1098-1118.	3.0	52
24	Image reconstruction for dynamic PET based on low-order approximation and restoration of the sinogram. IEEE Transactions on Medical Imaging, 1997, 16, 738-749.	8.9	49
25	An evaluation of methods for detecting brain activations from functional neuroimages. Artificial Intelligence in Medicine, 2002, 25, 69-88.	6.5	48
26	Application of the Karhunen-Loeve transform to 4D reconstruction of cardiac gated SPECT images. IEEE Transactions on Nuclear Science, 1999, 46, 1001-1008.	2.0	46
27	Spatiotemporal processing of gated cardiac SPECT images using deformable mesh modeling. Medical Physics, 2005, 32, 2839-2849.	3.0	46
28	Learning a Channelized Observer for Image Quality Assessment. IEEE Transactions on Medical Imaging, 2009, 28, 991-999.	8.9	46
29	Segmentation of dynamic PET or fMRI images based on a similarity metric. IEEE Transactions on Nuclear Science, 2003, 50, 1410-1414.	2.0	41
30	Multiple-image radiography for human soft tissue. Journal of Anatomy, 2006, 208, 115-124.	1.5	40
31	Dimensionality estimation for optimal detection of functional networks in BOLD fMRI data. NeuroImage, 2011, 56, 531-543.	4.2	40
32	Improved image quality and computation reduction in 4-D reconstruction of cardiac-gated SPECT images. IEEE Transactions on Medical Imaging, 2000, 19, 423-433.	8.9	39
33	Investigation of dose reduction in cardiac perfusion SPECT via optimization and choice of the image reconstruction strategy. Journal of Nuclear Cardiology, 2018, 25, 2117-2128.	2.1	35
34	Superresolved tomography by convex projections and detector motion. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1992, 9, 1547.	1.5	33
35	4D reconstruction for low-dose cardiac gated SPECT. Medical Physics, 2013, 40, 022501.	3.0	31
36	Effects of motion, attenuation, and scatter corrections on gated cardiac SPECT reconstruction. Medical Physics, 2011, 38, 6571-6584.	3.0	29

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37	Simultaneous assessment of cardiac perfusion and function using 5-dimensional imaging with Tc-99m teboroxime. Journal of Nuclear Cardiology, 2006, 13, 354-361.	2.1	28
38	Deep learning with noiseâ€toâ€noise training for denoising in SPECT myocardial perfusion imaging. Medical Physics, 2021, 48, 156-168.	3.0	28
39	Nondestructive volumetric imaging of tissue microstructure with benchtop x-ray phase-contrast tomography and critical point drying. Biomedical Optics Express, 2012, 3, 1924.	2.9	25
40	Computation of mass-density images from x-ray refraction-angle images. Physics in Medicine and Biology, 2006, 51, 1769-1778.	3.0	24
41	A quantitative evaluation study of four-dimensional gated cardiac SPECT reconstruction. Physics in Medicine and Biology, 2009, 54, 5643-5659.	3.0	24
42	Learning of Perceptual Similarity From Expert Readers for Mammogram Retrieval. IEEE Journal on Selected Topics in Signal Processing, 2009, 3, 53-61.	10.8	23
43	Iterative Image Reconstruction. , 2004, , 443-472.		22
44	Image classification at low light levels. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1986, 3, 2179.	1.5	20
45	4-D Reconstruction With Respiratory Correction for Gated Myocardial Perfusion SPECT. IEEE Transactions on Medical Imaging, 2017, 36, 1626-1635.	8.9	20
46	Object recognition based on impulse restoration with use of the expectation-maximization algorithm. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1998, 15, 2327.	1.5	17
47	Observers' ability to judge the similarity of clustered calcifications on mammograms. , 2004, , .		17
48	Regularized Fully 5D Reconstruction of Cardiac Gated Dynamic SPECT Images. IEEE Transactions on Nuclear Science, 2010, 57, 1085-1095.	2.0	16
49	Limited-angle effect compensation for respiratory binned cardiac SPECT. Medical Physics, 2015, 43, 443-454.	3.0	14
50	Infrared Imaging Technique may Help Demonstrate Iris Transillumination Defects in Blacks who Show Other Pigment Dispersion Syndrome Clinical Signs. Journal of Glaucoma, 2007, 16, 440-447.	1.6	13
51	Bayesian Kernel Methods for Analysis of Functional Neuroimages. IEEE Transactions on Medical Imaging, 2007, 26, 1613-1624.	8.9	13
52	Low-Dose Cardiac-Gated Spect Studies Using a Residual Convolutional Neural Network. , 2019, , .		13
53	Pattern classification by convex analysis. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1991, 8, 1874.	1.5	11
54	Digital Camera System to Perform Infrared Photography of Iris Transillumination. Journal of Glaucoma, 2002, 11, 426-428.	1.6	11

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55	Analysis of perceived similarity between pairs of microcalcification clusters in mammograms. Medical Physics, 2014, 41, 051904.	3.0	11
56	Image correlation at low light levels. Optics Letters, 1985, 10, 315.	3.3	10
57	Detectability of perfusion defect in fiveâ€dimensional gatedâ€dynamic cardiac SPECT images. Medical Physics, 2010, 37, 5102-5112.	3.0	9
58	Kalman sinogram restoration for fast and accurate PET image reconstruction. IEEE Transactions on Nuclear Science, 1998, 45, 3022-3029.	2.0	8
59	Iterative linear minimum mean-square-error image restoration from partially known blur. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 711.	1.5	8
60	Dynamic Image Reconstruction using Temporally Adaptive Regularization for Emission Tomography. , 2007, , .		8
61	Adaptation of a clustered lumpy background model for taskâ€based image quality assessment in xâ€ray phaseâ€contrast mammography. Medical Physics, 2012, 39, 906-911.	3.0	8
62	Motionâ€compensated image reconstruction vs postreconstruction correction in respiratoryâ€binned <scp>SPECT</scp> with standard and reducedâ€dose acquisitions. Medical Physics, 2018, 45, 2991-3000.	3.0	8
63	Effect of spatial coherence on knife-edge measurements of detector modulation transfer function. Applied Optics, 1994, 33, 5906.	2.1	7
64	Numerical observer for cardiac motion assessment using machine learning. Proceedings of SPIE, 2011, , .	0.8	7
65	A comparison study of image features between FFDM and film mammogram images. Medical Physics, 2012, 39, 4386-4394.	3.0	7
66	Novel Observations and Potential Applications Using Digital Infrared Iris Imaging. Ophthalmic Surgery Lasers and Imaging Retina, 2009, 40, 207-216.	0.7	7
67	Spatially Adaptive Temporal Smoothing for Reconstruction of Dynamic Image Sequences. IEEE Transactions on Nuclear Science, 2006, 53, 2769-2777.	2.0	6
68	Effect of Spatial Alignment Transformations in PCA and ICA of Functional Neuroimages. IEEE Transactions on Medical Imaging, 2007, 26, 1058-1068.	8.9	6
69	Personalized Models for Injected Activity Levels in SPECT Myocardial Perfusion Imaging. IEEE Transactions on Medical Imaging, 2019, 38, 1466-1476.	8.9	6
70	Evaluation of the effect of reducing administered activity on assessment of function in cardiac gated SPECT. Journal of Nuclear Cardiology, 2020, 27, 562-572.	2.1	6
71	Fully 5D reconstruction of gated dynamic cardiac SPECT images. , 2006, , .		5
72	Methods to detect objects in photon-limited images. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 272.	1.5	5

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73	Deformable mesh model of cardiac motion from tagged MRI data. , 2009, , .		5
74	Measurement of repeat effects in Chicagoâ€™s criminal social network. Applied Computing and Informatics, 2016, 12, 154-160.	5.9	5
75	Retrospective fractional dose reduction in Tc-99m cardiac perfusion SPECT/CT patients: A human and model observer study. Journal of Nuclear Cardiology, 2021, 28, 624-637.	2.1	5
76	Improving detection accuracy of perfusion defect in standard dose SPECT-myocardial perfusion imaging by deep-learning denoising. Journal of Nuclear Cardiology, 2022, 29, 2340-2349.	2.1	5
77	Quantification of Pupil Parameters in Diseased and Normal Eyes With Near Infrared Iris Transillumination Imaging. Ophthalmic Surgery Lasers and Imaging Retina, 2012, 43, 196-204.	0.7	5
78	A 3-D filtered-backprojection reconstruction algorithm for combined parallel- and cone-beam SPECT data. , 1993, , 387-400.		4
79	A preliminary study of multiple-image computed tomography. , 2004, , .		4
80	Generalization evaluation of numerical observers for image quality assessment. , 2006, , .		4
81	Fast dynamic image reconstruction for gated cardiac SPECT. , 2006, , .		4
82	Sampling strategies in multiple-image radiography. , 2008, , .		4
83	4D reconstruction of cardiac images using temporal fourier basis functions. , 2008, , .		4
84	Motion compensated spatio-temporal filtering of cardiac gated SPECT images. , 2008, , .		4
85	Development of a computational three-dimensional breast lesion phantom model. , 2010, , .		4
86	Multispectral Diagnostic Imaging of the Iris in Pigment Dispersion Syndrome. Journal of Glaucoma, 2012, 21, 351-357.	1.6	4
87	4D non-local means post-filtering for cardiac gated SPECT. , 2015, , .		4
88	An image-retrieval aided diagnosis system for clustered microcalcifications. , 2016, , .		4
89	Improving perfusion defect detection with respiratory motion correction in cardiac SPECT at standard and reduced doses. Journal of Nuclear Cardiology, 2019, 26, 1526-1538.	2.1	4
90	FOUR-DIMENSIONAL RECONSTRUCTION OF GATED CARDIAC SPECT WITH ATTENUATION AND SCATTER COMPENSATION. , 2007, , .		3

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91	Motion-compensated temporal summation of cardiac gated SPECT images using a deformable mesh model. , 2009, 2009, 3657-60.		3
92	Numerical observer for cardiac motion assessment. , 2010, , .		3
93	Motion-compensated reconstruction of gated cardiac SPECT images using a deformable mesh model. , 2010, , .		3
94	Channelized relevance vector machine as a numerical observer for cardiac perfusion defect detection task. , 2011, , .		3
95	Compensation of acquisition variations in respiratory-gated SPECT with joint statistical reconstruction. , 2015, , .		3
96	Optimizing motion correction in reconstruction of respiratory-gated spect. , 2016, , .		3
97	Mammogram Retrieval by Similarity Learning from Experts. , 2006, , .		2
98	Parameter estimation in Multiple-Image Radiography. , 2008, , .		2
99	Cardiac perfusion defect detection using gated dynamic SPECT imaging. , 2009, , .		2
100	Motion-compensated post-processing of gated cardiac SPECT images using a deformable mesh model. Proceedings of SPIE, 2009, , .	0.8	2
101	Numerical observer for cardiac motion assessment using a linear discriminant. , 2010, , .		2
102	4D reconstruction for dual cardiac-respiratory gated SPECT. , 2013, , .		2
103	Approximate 4D Reconstruction of Cardiac-Gated Spect Images Using a Residual Convolutional Neural Network. , 2019, , .		2
104	Application of the Multiple Image Radiography Method to Breast Imaging. Lecture Notes in Computer Science, 2006, , 289-298.	1.3	2
105	<title>Statistical analysis of dynamic sequences for functional imaging</title>. , 2000, 3978, 347.		1
106	Noise analysis and image denoising for DEI. , 2004, , .		1
107	Four-dimensional gated cardiac SPECT reconstruction and evaluation study. , 2007, , .		1
108	Limited-angle tomography for multiple-image radiography. , 2007, , .		1

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109	TOMOSYNTHESIS IMPLEMENTATION OF MULTIPLE IMAGE RADIOGRAPHY. , 2007, , .		1
110	Detectability of perfusion defect in gated dynamic cardiac SPECT images. , 2009, , .		1
111	4D reconstruction of cardiac gated SPECT images using a content-adaptive deformable mesh model. , 2010, , .		1
112	The Roles of Signal Processing in Medical Imaging [From the Guest Editors. IEEE Signal Processing Magazine, 2010, 27, 12-140.	5.6	1
113	Direct reconstruction of parametric images from cardiac gated dynamic spect data. , 2011, , .		1
114	Temporal regularization in fully 5D reconstruction of cardiac gated dynamic SPECT images. , 2011, , .		1
115	Utility of 4D reconstruction for low-dose cardiac gated SPECT. , 2012, , .		1
116	Noise properties and task-based evaluation of diffraction-enhanced imaging. Journal of Medical Imaging, 2014, 1, 033503.	1.5	1
117	Joint motion correction and image reconstruction in respiratory-gated SPECT. , 2016, , .		1
118	4D reconstruction of cardiac SPECT using a robust spatialtemporal prior. , 2017, , .		1
119	Sinogram Recovery of Dynamic PET Using Principal Component Analysis and Projections onto Convex Sets. , 1996, , 109-112.		1
120	A NEW INFRARED PHOTOGRAPHIC METHOD USING DIGITAL CAMERA TECHNOLOGY TO DETECT AND RECORD TRANSILLUMINATION DEFECTS OF THE IRIS.. Optometry and Vision Science, 2001, 78, 268.	1.2	0
121	Kernel Methods for Functional Neuroimaging Analysis. , 2006, , .		0
122	<title>Progress in multiple-image radiography</title>. , 2006, 6065, 256.		0
123	<title>Machine learning of human responses to images</title>. , 2006, 6065, 234.		0
124	A comparison of a generalized DEI method with multiple-image radiography. , 2006, 6318, 387.		0
125	5D Image Reconstruction for Tomographic Image Sequences. , 2006, , .		0
126	Validity of a fully coherent field model for in-line x-ray phase imaging. , 2008, , .		0

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127	Simultaneous estimation of the Markov random field parameters and the classes for image segmentation. , 2008, , .		0
128	Imaging in sitting position may reduce liver artifact in myocardium perfusion imaging. , 2009, , .		0
129	Analysis of the spectrum in phase-contrast mammography. Proceedings of SPIE, 2009, , .	0.8	0
130	Gated dynamic image reconstruction using temporal B-splines. , 2010, , .		0
131	Direct parametric reconstruction of gated dynamic cardiac spect. , 2011, , .		0
132	Exploring perceptually similar cases with multi-dimensional scaling. Proceedings of SPIE, 2014, , .	0.8	0
133	Limited-angle tomography for analyzer-based phase-contrast x-ray imaging. Physics in Medicine and Biology, 2014, 59, 3483-3500.	3.0	0
134	Reconstruction of respiratory-binned cardiac spect using a robust smoothing prior. , 2017, , .		0
135	Effect of Respiratory Motion Correction in Perfusion Spect Imaging. , 2018, , .		0