Wen-Liang Hwang

List of Publications by Year
in descending order

123 papers	4,851 citations	430874 18 h-index	128289 60 g-index
123 all docs	123 docs citations	123 times ranked	2854 citing authors

#	Article	IF	Citations
1	Singularity detection and processing with wavelets. IEEE Transactions on Information Theory, 1992, 38, 617-643.	2.4	3,334
2	Characterization of signals by the ridges of their wavelet transforms. IEEE Transactions on Signal Processing, 1997, 45, 2586-2590.	5.3	273
3	Multiridge detection and time-frequency reconstruction. IEEE Transactions on Signal Processing, 1999, 47, 480-492.	5.3	204
4	EMD Revisited: A New Understanding of the Envelope and Resolving the Mode-Mixing Problem in AM-FM Signals. IEEE Transactions on Signal Processing, 2012, 60, 1075-1086.	5.3	121
5	Analysis of Singularities From Modulus Maxima of Complex Wavelets. IEEE Transactions on Information Theory, 2005, 51, 1049-1062.	2.4	92
6	Null Space Pursuit: An Operator-based Approach to Adaptive Signal Separation. IEEE Transactions on Signal Processing, 2010, 58, 2475-2483.	5.3	65
7	Adaptive Signal Decomposition Based on Local Narrow Band Signals. IEEE Transactions on Signal Processing, 2008, 56, 2669-2676.	5.3	61
8	Analysis on Multiresolution Mosaic Images. IEEE Transactions on Image Processing, 2004, 13, 952-959.	9.8	47
9	Shape from texture: estimation of planar surface orientation through the ridge surfaces of continuous wavelet transform. IEEE Transactions on Image Processing, 1998, 7, 773-780.	9.8	31
10	Characterization of Self-Similar Multifractals with Wavelet Maxima. Applied and Computational Harmonic Analysis, 1994, 1, 316-328.	2.2	29
11	Wavelet analysis for brain-function imaging. IEEE Transactions on Medical Imaging, 1995, 14, 556-564.	8.9	27
12	Subband Weighting With Pixel Connectivity for 3-D Wavelet Coding. IEEE Transactions on Image Processing, 2009, 18, 52-62.	9.8	27
13	Wavelet Bayesian Network Image Denoising. IEEE Transactions on Image Processing, 2013, 22, 1277-1290.	9.8	26
14	Spatially-varying out-of-focus image deblurring with L1-2 optimization and a guided blur map. , 2012, , .		24
15	Automatic Microarray Spot Segmentation Using a Snake-Fisher Model. IEEE Transactions on Medical Imaging, 2008, 27, 847-857.	8.9	22
16	Multicomponent AM-FM signal separation and demodulation with null space pursuit. Signal, Image and Video Processing, 2013, 7, 1093-1102.	2.7	21
17	TRAFFIC FLOW ON A 3-LANE HIGHWAY. International Journal of Modern Physics B, 2004, 18, 4161-4171.	2.0	20
18	An asymmetric subspace watermarking method for copyright protection. IEEE Transactions on Signal Processing, 2005, 53, 784-792.	5.3	20

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19	Adaptive Integral Operators for Signal Separation. IEEE Signal Processing Letters, 2015, 22, 1383-1387.	3.6	19
20	Enhancing image watermarking methods with/without reference images by optimization on second-order statistics. IEEE Transactions on Image Processing, 2002, 11, 771-782.	9.8	16
21	Refinement and Universal Approximation via Sparsely Connected ReLU Convolution Nets. IEEE Signal Processing Letters, 2020, 27, 1175-1179.	3.6	16
22	Character extraction from documents using wavelet maxima. Image and Vision Computing, 1998, 16, 307-315.	4.5	15
23	Constrained Null Space Component Analysis for Semiblind Source Separation Problem. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 377-391.	11.3	14
24	ESTIMATION OF INSTANTANEOUS FREQUENCY PARAMETERS OF THE OPERATOR-BASED SIGNAL SEPARATION METHOD. Advances in Adaptive Data Analysis, 2009, 01, 573-586.	0.6	13
25	Robust speech recognition features based on temporal trajectory filtering of frequency band spectrum. , 0, , .		11
26	ACTIVE CONTOUR MODEL USING WAVELET MODULUS FOR OBJECT SEGMENTATION AND TRACKING IN VIDEO SEQUENCES. International Journal of Wavelets, Multiresolution and Information Processing, 2003, 01, 93-113.	1.3	10
27	Optimal Multiresolution Blending of Confocal Microscope Images. IEEE Transactions on Biomedical Engineering, 2012, 59, 531-541.	4.2	10
28	A Proximal Method for Dictionary Updating in Sparse Representations. IEEE Transactions on Signal Processing, 2015, 63, 3946-3958.	5.3	10
29	Null space component analysis for noisy blind source separation. Signal Processing, 2015, 109, 301-316.	3.7	10
30	SNR scalability based on bitplane coding of matching pursuit atoms at low bit rates: fine-grained and two-layer. IEEE Transactions on Circuits and Systems for Video Technology, 2005, 15, 3-14.	8.3	9
31	An Examplar-Based Approach for Texture Compaction Synthesis and Retrieval. IEEE Transactions on Image Processing, 2010, 19, 1307-1318.	9.8	9
32	Operator based multicomponent AM-FM signal separation approach. , 2011, , .		9
33	Gainâ€"shape optimized dictionary for matching pursuit video coding. Signal Processing, 2003, 83, 1937-1943.	3.7	8
34	Gridding spot centers of smoothly distorted microarray images. IEEE Transactions on Image Processing, 2006, 15, 342-353.	9.8	8
35	Color image enhancement using retinex with robust envelope. , 2009, , .		8
36	Multiple depth layers and all-in-focus image generations by blurring and deblurring operations. Pattern Recognition, 2017, 69, 184-198.	8.1	8

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37	Circuit variability interacts with excitatory-inhibitory diversity of interneurons to regulate network encoding capacity. Scientific Reports, 2018, 8, 8027.	3.3	8
38	Greedy orthogonal matching pursuit for subspace clustering to improve graph connectivity. Information Sciences, 2018, 459, 135-148.	6.9	8
39	Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. IEEE Transactions on Signal Processing, 2019, 67, 3330-3343.	5.3	8
40	Efficient Post-Compression Error-Resilient 3D-Scalable Video Transmission for Packet Erasure Channels. , 0, , .		7
41	Estimation of fractional Brownian motion embedded in a noisy environment using nonorthogonal wavelets. IEEE Transactions on Signal Processing, 1999, 47, 2211-2219.	5.3	7
42	Multiplication-free fast codeword search algorithm using Haar transform with squared-distance measure. Pattern Recognition Letters, 2000, 21, 399-405.	4.2	7
43	Colored multi-neuron image processing for segmenting and tracing neural circuits. , 2012, , .		7
44	A proximal method for the K-SVD dictionary learning. , 2013, , .		7
45	Null Space Component Analysis of One-Shot Single-Channel Source Separation Problem. IEEE Transactions on Signal Processing, 2021, 69, 2233-2251.	5.3	7
46	Estimation of 2-D noisy fractional Brownian motion and its applications using wavelets. IEEE Transactions on Image Processing, 2000, 9, 1407-1419.	9.8	6
47	Interlayer Bit Allocation for Scalable Video Coding. IEEE Transactions on Image Processing, 2012, 21, 2592-2606.	9.8	6
48	Reweighted and Adaptive Morphology Separation. SIAM Journal on Imaging Sciences, 2014, 7, 2078-2104.	2.2	6
49	Un-Rectifying Non-Linear Networks for Signal Representation. IEEE Transactions on Signal Processing, 2020, 68, 196-210.	5.3	6
50	Variational calculus approach to multiresolution image mosaic. , 0, , .		5
51	Advanced motion compensation techniques for blocking artifacts reduction in 3-D video coding systems. , 2005, , .		5
52	Multiple blocks matching pursuit update algorithm for low bit rate video coding. IEEE Transactions on Circuits and Systems for Video Technology, 2006, 16, 331-337.	8.3	5
53	Planar-shape prototype generation using a tree-based random greedy algorithm. IEEE Transactions on Systems, Man, and Cybernetics, 2006, 36, 649-659.	5.0	5
54	Modified similarity metric for non-local means algorithm. Electronics Letters, 2009, 45, 1307.	1.0	5

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55	Shape from texture based on the ridge of continuous wavelet transform. , 0, , .		4
56	Clock synchronization for fractal modulation. , 2002, , .		4
57	Subjective and Objective Comparison of Advanced Motion Compensation Methods for Blocking Artifact Reduction in a 3-D Wavelet Coding System. IEEE Transactions on Circuits and Systems for Video Technology, 2006, 16, 1134-1141.	8.3	4
58	A joint source and channel coding algorithm for error-resilient SPIHT-coded video bitstreams. Journal of Visual Communication and Image Representation, 2006, 17, 1164-1177.	2.8	4
59	Segmenting Microarray Image Spots using an Active Contour Approach. , 2007, , .		4
60	Learning adaptive interpolation kernels for fast single-image super resolution. Signal, Image and Video Processing, 2014, 8, 1077-1086.	2.7	4
61	Multi-Objective Optimization and Characterization of Pareto Points for Scalable Coding. IEEE Transactions on Circuits and Systems for Video Technology, 2019, 29, 2096-2111.	8.3	4
62	Timing acquisition for wavelet-based multirate transmissions. , 0, , .		3
63	Robust block-based EZW image compression with channel noise optimized rate-distortion functions. , 1999, , .		3
64	Fast Matching Pursuit Video Coding by Combining Dictionary Approximation and Atom Extraction. IEEE Transactions on Circuits and Systems for Video Technology, 2007, 17, 1679-1689.	8.3	3
65	Distortion estimation and bit allocation for MCTF based 3-D wavelet video coding. , 2008, , .		3
66	Multiple component predictive coding framework of still images. , 2011, , .		3
67	Image denoising using wavelet Bayesian network models. , 2012, , .		3
68	3D thin-plate spline registration for Drosophila brain surface model. , 2013, , .		3
69	Sparse representation of a blur kernel for out-of-focus blind image restoration. , 2016, , .		3
70	Wavelet based active contour model for object tracking. , 0, , .		2
71	Error Concealment Protection for Loss Resilient Bitplane-Coded Video Communications. , 0, , .		2
72	Performance evaluation of a novel sampling-based texture synthesis technique using different sized patches. Signal, Image and Video Processing, 2008, 2, 275-286.	2.7	2

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73	A Hybrid Coarse/Fine Layered Multicast Scheme Based on Hierarchical Bandwidth Inference Congestion Control. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 1776-1780.	8.3	2
74	A backward wavelet remesher for level of detail control and scalable coding. , 2014, , .		2
75	Improved optimization algorithm for proximal point-based dictionary updating methods. Journal of Electronic Imaging, 2016, 25, 053036.	0.9	2
76	Mixture of Gaussian Blur Kernel Representation for Blind Image Restoration. IEEE Transactions on Computational Imaging, 2017, 3, 783-797.	4.4	2
77	The fine-grained scalable video coding based on matching pursuits. , 0, , .		1
78	New temporal features for robust speech recognition with emphasis on microphone variations. Computer Speech and Language, 1999, 13, 65-78.	4.3	1
79	Scalable and robust image transmission using block-based layered set partitioning in hierarchical trees. Optical Engineering, 2003, 42, 1397.	1.0	1
80	A joint design of dictionary approximation and maximum atom extraction for fast matching pursuit. , 0, , .		1
81	Timing acquisition for fractal modulation in Gaussian white and 1/f channels. , 0, , .		1
82	Distortion-optimized transmission of multiple description coded images over noisy channels with feedback. , 0, , .		1
83	Video Compression Based on Orthonormal Matching Pursuits. , 0, , .		1
84	Mode Selection and Optimal Rate Control for Video Coding using an and-or Tree Representation. Proceedings International Conference on Image Processing, 2007, , .	0.0	1
85	An Automatic Eye Wink Interpretation System for the Disable. , 2007, , .		1
86	A Subspace Approach to Timing Acquisition for Wavelet-Based Multirate Transmissions. IEEE Transactions on Communications, 2007, 55, 1111-1115.	7.8	1
87	Iris Recognition Based on Matching Pursuits. , 2008, , .		1
88	Biomedical image mosaicing: An optimized multiscale approach. , 2011, , .		1
89	Optimal Bit-allocation for Wavelet-based Scalable Video Coding. , 2012, , .		1
90	AND-OR tree-based mode selection for video coding. Signal, Image and Video Processing, 2012, 6, 259-271.	2.7	1

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91	MULTIPLE COMPONENT PREDICTIVE CODING OF IMAGES. International Journal of Wavelets, Multiresolution and Information Processing, 2013, 11, 1350012.	1.3	1
92	Estimating particulate matter using COTS cameras. , 2015, , .		1
93	Continuous piecewise affine transformation for image registration. International Journal of Wavelets, Multiresolution and Information Processing, 2015, 13, 1550006.	1.3	1
94	Extending depth of field in noisy light field photography. , 2017, , .		1
95	Deriving 3D shape properties by using backward wavelet remesher. , 2017, , .		1
96	Learning Parseval Frames for Sparse Representation with Frame Perspective. , 2018, , .		1
97	Depth Extraction from a Single Image and Its Application. , 0, , .		1
98	Fast Implementation of the Subband Weighting for 3D Wavelet Coding. ISRN Signal Processing, 2011, 2011, 1-14.	2.9	1
99	Un-rectifying ReLU Deep Neural Network in Compressed Sensing Recovery. , 2021, , .		1
100	Shape from texture using continuous wavelet transform. , 2000, , .		0
101	A multi-channel channel-optimized scheme for EZW using rate-distortion functions. , 0, , .		0
102	Matching pursuits low bit rate video coding with codebooks adaptation. , 0, , .		0
103	Enhancing image watermarking methods by second order statistics. , 0, , .		0
104	Segmentation of Perspective Textured Planes through the Ridges of Continuous Wavelet Transform. Journal of Visual Communication and Image Representation, 2001, 12, 201-216.	2.8	0
105	An ARQ-based diversity system for transmission of EZW compressed images over noisy channels. , 0, , .		0
106	Complex-valued wavelet transform applications in planar shape prototype generation and recognition. , 0, , .		0
107	An asymmetric watermarking method for copyright protection utilizing dual bases. , 2005, , .		0
108	Multiple blocks update algorithm for matching pursuit video coding. , 2005, , .		0

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109	A Sampling-Based Gem Algorithm with Classification for Texture Synthesis. , 0, , .		0
110	Data-aided frame timing acquisition for fractal modulation in an AWGN channel. Signal Processing, 2006, 86, 310-318.	3.7	0
111	Design Error-Resilient Multiple Substreams 3D Coder Including Receiver Post-Processing in Analysis. , 2006, , .		0
112	Automatic Eye Winks Interpretation System for Human-Machine Interface. Eurasip Journal on Image and Video Processing, 2007, 2007, 1-9.	2.6	0
113	Combined Error Concealment and Error Correction in Rate-Distortion Analysis for Multiple Substream Transmissions. IEEE Transactions on Image Processing, 2007, 16, 1022-1035.	9.8	0
114	A fast content-dependent interpolation approach via adaptive filtering. , 2008, , .		0
115	Example-based single image enhanced up-sampling. , 2012, , .		0
116	Message Passing Using the Cover Text as Secret Key. , 2012, , .		0
117	An integral operator based adaptive signal separation approach. , 2013, , .		0
118	Re-weighting the morphological diversity. , 2014, , .		0
119	A surface-constrained volumetric alignment method for image atlasing. , 2015, , .		0
120	Light field upsampling by joint bilateral filtering on epipolar plane images. , 2016, , .		0
121	Ambiguity and sensitivity in imprecise dictionaries for compressed sensing. Signal Processing, 2021, 178, 107756.	3.7	0
122	A Hybrid Motion Compensated 3-D Video Coding System for Blocking Artifacts Reduction. Lecture Notes in Computer Science, 2005, , 535-546.	1.3	0
123	Image Restoration and Noise Reduction with Context-Dependent Wavelet Graph and ADMM Optimization. , 0, , .		0