Wan-Chi Siu

List of Publications by Year
in descending order

193 papers	1,919 citations	516561 16 h-index	434063 31 g-index
193 all docs	193 docs citations	193 times ranked	1218 citing authors

#	Article	IF	Citations
1	Single image super-resolution using Gaussian process regression. , 2011, , .		191
2	Lightening Network for Low-Light Image Enhancement. IEEE Transactions on Image Processing, 2020, 29, 7984-7996.	6.0	133
3	Fast Image Interpolation via Random Forests. IEEE Transactions on Image Processing, 2015, 24, 3232-3245.	6.0	92
4	Improved techniques for automatic image segmentation. IEEE Transactions on Circuits and Systems for Video Technology, 2001, 11, 1273-1280.	5.6	74
5	Frame Complexity-Based Rate-Quantization Model for H.264/AVC Intraframe Rate Control. IEEE Signal Processing Letters, 2008, 15, 373-376.	2.1	68
6	Novel Adaptive Algorithm for Intra Prediction With Compromised Modes Skipping and Signaling Processes in HEVC. IEEE Transactions on Circuits and Systems for Video Technology, 2013, 23, 1686-1694.	5.6	66
7	Learning Hierarchical Decision Trees for Single-Image Super-Resolution. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 937-950.	5.6	53
8	An efficient search strategy for block motion estimation using image features. IEEE Transactions on Image Processing, 2001, 10, 1223-1238.	6.0	47
9	Image Super-Resolution via Attention Based Back Projection Networks. , 2019, , .		44
10	Two-Channel Linear Phase FIR QMF Bank Minimax Design via Global Nonconvex Optimization Programming. IEEE Transactions on Signal Processing, 2010, 58, 4436-4441.	3.2	41
11	Machine Learning-Based Fast Intra Mode Decision for HEVC Screen Content Coding via Decision Trees. IEEE Transactions on Circuits and Systems for Video Technology, 2020, 30, 1481-1496.	5.6	40
12	Online-Learning-Based Bayesian Decision Rule for Fast Intra Mode and CU Partitioning Algorithm in HEVC Screen Content Coding. IEEE Transactions on Image Processing, 2020, 29, 170-185.	6.0	39
13	An efficient low bit-rate video-coding algorithm focusing on moving regions. IEEE Transactions on Circuits and Systems for Video Technology, 2001, 11, 1128-1134.	5.6	35
14	Reduced-Complexity Intra Block Copy (IntraBC) Mode With Early CU Splitting and Pruning for HEVC Screen Content Coding. IEEE Transactions on Multimedia, 2019, 21, 269-283.	5.2	31
15	Hierarchical Back Projection Network for Image Super-Resolution. , 2019, , .		30
16	Fast and efficient intra coding techniques for smooth regions in screen content coding based on boundary prediction samples. , 2015, , .		28
17	Adaptive Search Range for HEVC Motion Estimation Based on Depth Information. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 2216-2230.	5.6	24
18	Photo-Realistic Image Super-Resolution via Variational Autoencoders. IEEE Transactions on Circuits and Systems for Video Technology, 2021, 31, 1351-1365.	5.6	24

#	Article	IF	Citations
19	Unsupervised Real Image Super-Resolution via Generative Variational AutoEncoder. , 2020, , .		23
20	Improved image interpolation using bilateral filter for weighted least square estimation. , 2010, , .		21
21	Efficient Learning in Adaptive Processing of Data Structures. Neural Processing Letters, 2003, 17, 175-190.	2.0	20
22	Hash based fast local search for Intra Block Copy (IntraBC) mode in HEVC screen content coding. , 2015, , .		20
23	Fast HEVC screen content coding by skipping unnecessary checking of intra block copy mode based on CU activity and gradient. , 2016, , .		19
24	Effective bi-directional people flow counting for real time surveillance system. , 2011, , .		18
25	Maximally Decimated Paraunitary Linear Phase FIR Filter Bank Design via Iterative SVD Approach. IEEE Transactions on Signal Processing, 2015, 63, 466-481.	3.2	18
26	Extraction and optimization of B-spline PBD templates for recognition of connected handwritten digit strings. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2002, 24, 132-139.	9.7	17
27	Features Guided Face Super-Resolution via Hybrid Model of Deep Learning and Random Forests. IEEE Transactions on Image Processing, 2021, 30, 4157-4170.	6.0	17
28	Efficient reverse-play algorithms for MPEG video with VCR support. IEEE Transactions on Circuits and Systems for Video Technology, 2006, 16, 19-30.	5.6	16
29	Computationally-scalable motion estimation algorithm for H.264/AVC video coding. IEEE Transactions on Consumer Electronics, 2010, 56, 895-903.	3.0	16
30	Quadtree decision for depth intra coding in 3D-HEVC by good feature. , 2016, , .		16
31	Adaptive Directional Window Selection for Edge-Directed Interpolation. , 2010, , .		15
32	Real time railway extraction by angle alignment measure. , 2015, , .		15
33	A smart moving vehicle detection system using motion vectors and generic line features. IEEE Transactions on Consumer Electronics, 2015, 61, 384-392.	3.0	15
34	Fast mode decision algorithm for HEVC screen content intra coding. , 2017, , .		15
35	Exploiting inter-layer correlations in scalable HEVC for the support of screen content videos. , 2014, , .		14
36	Image super-resolution via weighted random forest. , 2017, , .		14

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37	Reference Based Face Super-Resolution. IEEE Access, 2019, 7, 129112-129126.	2.6	14
38	Deep Relighting Networks for Image Light Source Manipulation. Lecture Notes in Computer Science, 2020, , 550-567.	1.0	14
39	Local affine motion prediction for H.264 without extra overhead. , 2010, , .		13
40	DeepGIN: Deep Generative Inpainting Network for Extreme Image Inpainting. Lecture Notes in Computer Science, 2020, , 5-22.	1.0	13
41	Low Complexity H.263 to H.264 Video Transcoding using Motion Vector Decomposition. , 0, , .		12
42	Accurate distance estimation using camera orientation compensation technique for vehicle driver assistance system. , 2012, , .		12
43	Hybrid DCT-Wiener-based interpolation via learnt Wiener filter. , 2013, , .		12
44	Single-image super-resolution using iterative Wiener filter based on nonlocal means. Signal Processing: Image Communication, 2015, 39, 26-45.	1.8	12
45	Human face recognition using a spatially weighted modified Hausdorff distance. , 0, , .		11
46	An Efficient Recursive Shortest Spanning Tree Algorithm Using Linking Properties. IEEE Transactions on Circuits and Systems for Video Technology, 2004, 14, 852-863.	5.6	11
47	Fast iterative motion and disparity estimation algorithm for multiview video coding. , 2010, , .		11
48	Improved SIMD Architecture for High Performance Video Processors. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1769-1783.	5.6	11
49	View synthesis optimization based on texture smoothness for 3D-HEVC. , 2015, , .		11
50	Practical application of random forests for super-resolution imaging. , 2015, , .		11
51	DeepSCC: Deep Learning Based Fast Prediction Network for Screen Content Coding. IEEE Transactions on Circuits and Systems for Video Technology, 2019, , 1-1.	5.6	11
52	A class of competitive learning models which avoids neuron underutilization problem. IEEE Transactions on Neural Networks, 1998, 9, 1258-1269.	4.8	10
53	Fast image super-resolution via Randomized Multi-split Forests. , 2017, , .		10
54	Efficient recursive algorithm for the inverse discrete cosine transform. IEEE Signal Processing Letters, 2000, 7, 276-277.	2.1	9

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55	Quantized Transform-Domain Motion Estimation for SP-Frame Coding in Viewpoint Switching of Multiview Video. IEEE Transactions on Circuits and Systems for Video Technology, 2010, 20, 365-381.	5.6	9
56	Cascaded Random Forests for Fast Image Super-Resolution. , 2018, , .		9
57	Variational AutoEncoder for Reference based Image Super-Resolution. , 2021, , .		9
58	New Block-Based Motion Estimation for Sequences with Brightness Variation and Its Application to Static Sprite Generation for Video Compression. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 522-527.	5.6	8
59	Progressive image coding based on visually important features. , 1999, , .		7
60	An efficient computational scheme for the two-dimensional overcomplete wavelet transform. IEEE Transactions on Signal Processing, 2002, 50, 2806-2819.	3.2	7
61	H.264 fast intra mode selection algorithm based on direction difference measure in the pixel domain. , 2009, , .		7
62	Fast video interpolation/upsampling using linear motion model. , 2011, , .		7
63	Image super-resolution via hybrid NEDI and wavelet-based scheme. , 2015, , .		7
64	Vehicle detection under tough conditions using prioritized feature extraction with shadow recognition. , 2017, , .		7
65	Fast global motion estimation for sprite generation. , 0, , .		6
66	Redundancy Reduction Technique for Dual-Bitstream MPEG Video Streaming With VCR Functionalities. IEEE Transactions on Broadcasting, 2008, 54, 412-418.	2.5	6
67	Keyframe selection for motion capture using motion activity analysis. , 2012, , .		6
68	Decoder side merge mode and AMVP in HEVC screen content coding. , 2017, , .		6
69	Fast intraprediction for high-efficiency video coding screen content coding by content analysis and dynamic thresholding. Journal of Electronic Imaging, 2018, 27, 1.	0.5	6
70	Generalized dual-point Hough transform for object recognition. , 0, , .		5
71	Face segmentation and facial feature tracking for videophone applications. , 0, , .		5
72	Dynamic frame skipping for high-performance transcoding. , 0, , .		5

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73	A fast bit allocation algorithm for MPEG audio encoder. , 0, , .		5
74	Generalized Hough Transform Using Regions with Homogeneous Color. International Journal of Computer Vision, 2004, 59, 183-199.	10.9	5
75	A Fast View-Temporal Prediction Algorithm for Stereoscopic Video Coding. , 2009, , .		5
76	Fast video object detection via multiple background modeling. , 2010, , .		5
77	Transform Kernel Selection Strategy for the H.264/AVC and Future Video Coding Standards. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1631-1645.	5.6	5
78	Improved lossless coding algorithm in H.264/AVC based on hierarchical intra prediction. , 2011, , .		5
79	Low relative speed moving vehicle detection using motion vectors and generic line features. , 2015, , .		5
80	Fast image interpolation with decision tree. , 2015, , .		5
81	Efficient wedgelet pattern decision for depth modeling modes in three-dimensional high-efficiency video coding. Journal of Electronic Imaging, 2016, 25, 033023.	0.5	5
82	Document image matching based on component blocks. , 2000, , .		4
83	New approaches without postprocessing to FIR system identification using selected order cumulants. IEEE Transactions on Signal Processing, 2000, 48, 1144-1153.	3.2	4
84	An efficient algorithm for the extraction of a Euclidean skeleton. , 2002, , .		4
85	An efficient color compensation scheme for skin color segmentation. , 0, , .		4
86	Maximal disk based histogram for shape retrieval. , 0, , .		4
87	Fast motion estimation for wavelet-based video coding. , 0, , .		4
88	Retinex based motion estimation for sequences with brightness variations and its application to H.264. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	4
89	Viewpoint switching in multiview videos using SP-frames. , 2008, , .		4
90	Efficient inter mode decision for H.263 to H.264 video transcoding using support vector machines. , 2009, , .		4

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91	New motion compensation model via frequency classification for fast video super-resolution. , 2009, , .		4
92	A new motion vector composition algorithm for fast-forward video playback in H.264. , 2010, , .		4
93	Low-complexity intra prediction algorithm for video down-sizing transcoder. , 2011, , .		4
94	Depth-assisted nonlocal means hole filling for novel view synthesis. , 2012, , .		4
95	A two dimensional camera identification method based on image sensor noise. , 2012, , .		4
96	Depth-based adaptive search range algorithm for motion estimation in HEVC. , 2014, , .		4
97	Fast Monocular Visual Place Recognition for Non-Uniform Vehicle Speed and Varying Lighting Environment. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 1679-1696.	4.7	4
98	Adopting SP/SI-Frames in Dual-Bitstream Video Streaming with VCR Support. , 0, , .		3
99	Analysis of the convergence and divergence of a constrained anti-Hebbian learning algorithm. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1998, 45, 1494-1502.	2.3	3
100	An efficient and accurate algorithm for extracting a skeleton. , 0, , .		3
101	A robust model generation technique for model-based video coding. IEEE Transactions on Circuits and Systems for Video Technology, 2001, 11, 1188-1192.	5.6	3
102	A new approach using modified Hausdorff distances with eigenface for human face recognition. , 0, , .		3
103	Efficient reverse-play algorithm for MPEG video streaming with VCR functionality. , 0, , .		3
104	DCT-based video frame-skipping transcoder. , 0, , .		3
105	An efflcient fractal-based algorithm for image magnification. , 0, , .		3
106	Image annotation with parametric mixture model based multi-class multi-labeling. , 2008, , .		3
107	Fast motion and disparity estimation for multiview video coding. Frontiers of Computer Science, 2010, 4, 571-579.	0.6	3
108	Reply to â€œComments on â€˜The Discrete Periodic Radon Transformâ€™â€• IEEE Transactions on Signal Processing, 2010, 58, 5963-5964.	3.2	3

#	Article	IF	Citations
109	Design of variable bandwidth symmetric/anti-symmetric FIR single-band PCLS lowpass and highpass filters. Signal, Image and Video Processing, 2016, 10, 37-43.	1.7	3
110	Joint Back Projection and Residual Networks for Efficient Image Super-Resolution. , 2018, , .		3
111	Fast Monocular Vision-based Railway Localization for Situations with Varying Speeds. , 2018, , .		3
112	Efficient Video Super-Resolution via Hierarchical Temporal Residual Networks. IEEE Access, 2021, 9, 106049-106064.	2.6	3
113	An adaptive partial distortion search for block motion estimation. , 0, , .		2
114	A novel illumination compensation scheme for sprite coding. , 0, , .		2
115	A feature-assisted search strategy for block motion estimation. , 1999, , .		2
116	Recursive algorithm for the realization of the discrete cosine transform. , 0, , .		2
117	Priority search technique for MPEG-4 motion estimation of arbitrarily shaped video object. , 0, , .		2
118	A dynamic frame-skipping video combiner for multipoint video conferencing. , 0, , .		2
119	An efficient human face indexing scheme using eigenfaces. , 2003, , .		2
120	An effieient algorithm for fractal image coding using kick-out and zero contrast conditions. , 0, , .		2
121	A compressed-domain heterogeneous video transcoder. , 0, , .		2
122	Macroblock-based reverse play algorithm for MPEG video streaming. , 0, , .		2
123	Macroblock-Based Algorithm for Dual-Bitstream MPEG Video Streaming with VCR Functionalities. , 0, , .		2
124	Diversity and Importance Measures for Video Downscaling. , 0, , .		2
125	Adaptive HAAR-Like MCTF Based Wavelet Video Coding Scheme. , 2007, , .		2
126	Fast intra mode decision algorithm for H.263 to H.264/AVC transcoding. , 2008, , .		2

#	Article	IF	Citations
127	Comments on "2-D Order-16 Integer Transforms for HD Video Coding. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1765-1767.	5.6	2
128	Real-time interpolation using bilateral filter for image zoom or video up-scaling/transcoding. , 2012, , .		2
129	Novel multi-step recursive sampling strategy for particle filtering in object tracking. , 2012, , .		2
130	Early merge mode decision for depth maps in 3D-HEVC. , 2017, , .		2
131	Fast HEVC to SCC Transcoding Based on Decision Trees. , 2018, , .		2
132	See360: Novel Panoramic View Interpolation. IEEE Transactions on Image Processing, 2022, 31, 1857-1869.	6.0	2
133	Improved macroblock-based reverse play algorithm for MPEG video streaming. , 0, , .		1
134	A robust global motion estimation scheme for sprite coding. , 0, , .		1
135	Reliable search strategy for block motion estimation by measuring the error surface. , 1999, , .		1
136	Effect of channel quality estimation error on the performance of interactive mobile video system. , 0, , .		1
137	Fast algorithm for binary field wavelet transform for image processing. , 0, , .		1
138	Efficient prime factor algorithm and address generation techniques for the discrete cosine transform. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2001, 48, 985-988.	2.3	1
139	A robust algorithm for detection of human faces in color images. , 0, , .		1
140	A dynamic video combiner for multipoint video conferencing using wavelet transform. , 0, , .		1
141	Block motion estimation using adaptive partial distortion search. , 0, , .		1
142	Fast DCT to it conversion using integer approximation for H.263 to H.264 video transcoding. , 0, , .		1
143	Reference picture selection in an already MPEG encoded bitstream. , 2005, , .		1
144	A Fast Full Search Scheme for Rate-Distortion Optimization of Variable Block Size and Multi-frame Motion Estimation. Midwest Symposium on Circuits and Systems, 2006, , .	1.0	1

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145	Efficient Motion Estimation in H.264 Reverse Transcoding. , 2007, , .		1
146	A Simplified Dual-Bitstream MPEG Video Streaming System with VCR Functionalities. , 2007, , .		1
147	Fast block size selection for H.264 video-downsizing transcoding. , 2010, , .		1
148	Improved hierarchial intra prediction based on adaptive interpolation filtering for lossless compression. , 2013, , .		1
149	Improved algorithm for detecting zeroâ€quantised discrete cosine transform coefficients in H.264/AVC (revised version). IET Image Processing, 2013, 7, 92-97.	1.4	1
150	Region-based weighted prediction algorithm for H.264/AVC video coding. , 2013, , .		1
151	Weighting optimization with neural network for photo-response-non-uniformity-based source camera identification. , 2014, , .		1
152	Using large color LBP in generalized hough transform. , 2014, , .		1
153	A joint framework for missing values estimation and biclusters detection in gene expression data. International Journal of Bioinformatics Research and Applications, 2014, 10, 574.	0.1	1
154	Compressing population DNA sequences using multiple reference sequences. , 2017, , .		1
155	Adaptive search range by depth variant decaying weights for HEVC inter texture coding. , 2017, , .		1
156	Learning via Decision Trees Approach for Video Super-Resolution. , 2017, , .		1
157	Vision-based Place Recognition Using ConvNet Features and Temporal Correlation Between Consecutive Frames. , 2019, , .		1
158	Video Lightening with Dedicated CNN Architecture. , 2021, , .		1
159	Adaptive shrinkage algorithm for ringing suppression with smoothness constraint. , 0, , .		0
160	New dominant point detection for image recognition. , 0, , .		0
161	Blocking artifacts removal with a successive structure analysis using wavelet transform. , 0, , .		0
162	Suppression of ringing artifacts with an adaptive shrinkage algorithm. , 0, , .		0

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163	A very low bit-rate video coding algorithm by focusing on moving regions. , 0, , .		0
164	Blind speech separation algorithm for dynamically mixing systems. , 0, , .		0
165	Locating the human eye using fractal dimensions. , 0, , .		0
166	Fast search algorithm for edge-oriented block matching algorithm. , 0, , .		0
167	Image classification with adaptive processing of BSP image representation. , 0, , .		0
168	Robust learning in adaptive processing of data structures for tree representation based image classification. , 0, , .		0
169	Architecture of wavelet-based frame skipping transcoder. , 2003, , .		0
170	Symmetric prefilters for multiwavelets. , 0, , .		0
171	New adaptive partial distortion search using clustered pixel matching error characteristic. , 0, , .		0
172	Robust and fast global motion estimation for arbitrarily shaped video objects in MPEG-4. , 0, , .		0
173	Efficient algorithm for reverse playback in MPEG video streaming. , 0, , .		0
174	New Pixel-DCT Domain Coding Technique for Object Based and Frame Based Prediction Error. , 0, , .		0
175	New Block-Based Motion Estimation for Sequences with Illumination Variation and its Application to Video Mosaicking. , 0, , .		0
176	New Results on Exhaustive Search Algorithm for Motion Estimation using Adaptive Partial Distortion Search and Successive Elimination Algorithm. , 0, , .		0
177	Coding directional angles using context-based adaptive arithmetic code. , 2008, , .		0
178	Windowing technique for the DCT based retinex algorithm to handle videos with brightness variations coded using the H.264. , 2008, , .		0
179	Constrained one-bit transform for retinex based motion estimation for sequences with brightness variations. , 2008, , .		0
180	Realizing super-resolution with a directional anisotropic correlation model. , 2009, , .		0

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181	Computationally-scal&#x00E0;ble motion estimation algorithm for H.264/AVC video coding. , 2010, , .		0
182	Improved hybrid coding scheme for intra 4×4 residual block produced by H.264/AVC. , 2010, , .		0
183	Further directional search on integer-pixel variable block size motion estimation for H.264/AVC. , 2010, , .		0
184	Motion capture keyframing by motion change manipulation. , 2011, , .		0
185	Fast iterative search for motion and disparity estimation in stereoscopic video coding. , 2011, , .		0
186	A New Dual-bitstream Video Streaming System with VCR Functionalities Using SP/SI-frames. Journal of Signal Processing Systems, 2011, 62, 403-414.	1.4	0
187	Motion vector composition in low-delay hierarchical P-frame coding. , 2013, , .		0
188	New multi-step sampling with adaptive sampling patterns in particle filtering for tracking in surveillance systems. , 2013, , .		0
189	Hybrid DCT-Wiener-Based interpolation using dual MMSE estimator scheme. , 2014, , .		0
190	Block-adaptive DCT-Wiener image up-sampling. , 2014, , .		0
191	Use of sensor noise for source identification. , 2015, , .		0
192	Depth-projected determination for adaptive search range in motion estimation for HEVC. , 2017, , .		0
193	RESTORING IMAGES WITH REGULARIZATION IN UNCORRELATED TRANSFORM DOMAIN. , 2003, , .		0