Mai Xu

List of Publications by Year
in descending order

130 papers	3,927 citations	218381 26 h-index	174990 52 g-index
130 all docs	130 docs citations	130 times ranked	2747 citing authors

#	Article	IF	Citations
1	Reducing Complexity of HEVC: A Deep Learning Approach. IEEE Transactions on Image Processing, 2018, 27, 5044-5059.	6.0	247
2	Development and Validation of a Deep Learning System to Detect Glaucomatous Optic Neuropathy Using Fundus Photographs. JAMA Ophthalmology, 2019, 137, 1353.	1.4	188
3	State-of-the-Art in 360° Video/Image Processing: Perception, Assessment and Compression. IEEE Journal on Selected Topics in Signal Processing, 2020, 14, 5-26.	7.3	171
4	A Large-Scale Database and a CNN Model for Attention-Based Glaucoma Detection. IEEE Transactions on Medical Imaging, 2020, 39, 413-424.	5.4	153
5	Multi-frame Quality Enhancement for Compressed Video. , 2018, , .		148
6	A Deep Learning Approach for Multi-Frame In-Loop Filter of HEVC. IEEE Transactions on Image Processing, 2019, 28, 5663-5678.	6.0	138
7	Predicting Head Movement in Panoramic Video: A Deep Reinforcement Learning Approach. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 2693-2708.	9.7	132
8	Attention Based Glaucoma Detection: A Large-Scale Database and CNN Model. , 2019, , .		132
9	Enhancing Quality for HEVC Compressed Videos. IEEE Transactions on Circuits and Systems for Video Technology, 2019, 29, 2039-2054.	5.6	127
10	MFQE 2.0: A New Approach for Multi-Frame Quality Enhancement on Compressed Video. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 949-963.	9.7	123
11	Assessing Visual Quality of Omnidirectional Videos. IEEE Transactions on Circuits and Systems for Video Technology, 2019, 29, 3516-3530.	5.6	120
12	DeepVS: A Deep Learning Based Video Saliency Prediction Approach. Lecture Notes in Computer Science, 2018, , 625-642.	1.0	104
13	DeepQTMT: A Deep Learning Approach for Fast QTMT-Based CU Partition of Intra-Mode VVC. IEEE Transactions on Image Processing, 2021, 30, 5377-5390.	6.0	95
14	Decoder-side HEVC quality enhancement with scalable convolutional neural network. , 2017, , .		85
15	Region-of-Interest Based Conversational HEVC Coding with Hierarchical Perception Model of Face. IEEE Journal on Selected Topics in Signal Processing, 2014, 8, 475-489.	7.3	81
16	Optimal Bit Allocation for CTU Level Rate Control in HEVC. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 2409-2424.	5.6	80
17	DeepMTT: A deep learning maneuvering target-tracking algorithm based on bidirectional LSTM network. Information Fusion, 2020, 53, 289-304.	11.7	78
18	Bridge the Gap Between VQA and Human Behavior on Omnidirectional Video. , 2018, , .		76

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19	Improving Wireless Security for Bidirectional Communication Scenarios. IEEE Transactions on Vehicular Technology, 2012, 61, 2842-2848.	3.9	57
20	A subjective visual quality assessment method of panoramic videos. , 2017, , .		56
21	HiNet: Deep Image Hiding by Invertible Network. , 2021, , .		56
22	A deep convolutional neural network approach for complexity reduction on intra-mode HEVC. , 2017, , .		54
23	Closed-Form Optimization on Saliency-Guided Image Compression for HEVC-MSP. IEEE Transactions on Multimedia, 2018, 20, 155-170.	5.2	54
24	Wavelet Domain Style Transfer for an Effective Perception-Distortion Tradeoff in Single Image Super-Resolution. , 2019, , .		53
25	Weight-based R-λ rate control for perceptual HEVC coding on conversational videos. Signal Processing: Image Communication, 2015, 38, 127-140.	1.8	50
26	Learning to Detect Video Saliency With HEVC Features. IEEE Transactions on Image Processing, 2017, 26, 369-385.	6.0	49
27	Secrecy Rate Optimization for Secure Multicast Communications. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 1417-1432.	7.3	48
28	Joint Learning of 3D Lesion Segmentation and Classification for Explainable COVID-19 Diagnosis. IEEE Transactions on Medical Imaging, 2021, 40, 2463-2476.	5.4	48
29	Learning QoE of Mobile Video Transmission With Deep Neural Network: A Data-Driven Approach. IEEE Journal on Selected Areas in Communications, 2019, 37, 1337-1348.	9.7	46
30	Deep Coupled Feedback Network for Joint Exposure Fusion and Image Super-Resolution. IEEE Transactions on Image Processing, 2021, 30, 3098-3112.	6.0	45
31	Viewport Proposal CNN for 360° Video Quality Assessment. , 2019, , .		40
32	Inter-Block Dependency-Based CTU Level Rate Control for HEVC. IEEE Transactions on Broadcasting, 2020, 66, 113-126.	2.5	36
33	Compressibility Constrained Sparse Representation With Learnt Dictionary for Low Bit-Rate Image Compression. IEEE Transactions on Circuits and Systems for Video Technology, 2014, 24, 1743-1757.	5.6	34
34	Subjective-Driven Complexity Control Approach for HEVC. IEEE Transactions on Circuits and Systems for Video Technology, 2016, 26, 91-106.	5.6	34
35	Quality-Gated Convolutional Lstm for Enhancing Compressed Video. , 2019, , .		30
36	Learning to Predict Saliency on Face Images. , 2015, , .		28

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37	Model-Free Distortion Rectification Framework Bridged by Distortion Distribution Map. IEEE Transactions on Image Processing, 2020, 29, 3707-3718.	6.0	28
38	Viewport-Dependent Saliency Prediction in 360Â° Video. IEEE Transactions on Multimedia, 2021, 23, 748-760.	5.2	27
39	Multi-level Wavelet-Based Generative Adversarial Network for Perceptual Quality Enhancement of Compressed Video. Lecture Notes in Computer Science, 2020, , 405-421.	1.0	26
40	Predicting Salient Face in Multiple-Face Videos. , 2017, , .		24
41	Embracing non-orthogonalmultiple access in future wireless networks. Frontiers of Information Technology and Electronic Engineering, 2018, 19, 322-339.	1.5	24
42	Early Exit or Not: Resource-Efficient Blind Quality Enhancement for Compressed Images. Lecture Notes in Computer Science, 2020, , 275-292.	1.0	24
43	Bayesian Hyperspectral and Multispectral Image Fusions via Double Matrix Factorization. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 5666-5678.	2.7	21
44	An EM-Based User Clustering Method in Non-Orthogonal Multiple Access. IEEE Transactions on Communications, 2019, 67, 8422-8434.	4.9	20
45	A hierarchical deep learning approach with transparency and interpretability based on small samples for glaucoma diagnosis. Npj Digital Medicine, 2021, 4, 48.	5.7	19
46	Joint Learning of Multi-Level Tasks for Diabetic Retinopathy Grading on Low-Resolution Fundus Images. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 2216-2227.	3.9	19
47	Deep Homography for Efficient Stereo Image Compression. , 2021, , .		19
48	Texture-Classification Accelerated CNN Scheme for Fast Intra CU Partition in HEVC. , 2019, , .		18
49	Patch-Wise Spatial-Temporal Quality Enhancement for HEVC Compressed Video. IEEE Transactions on Image Processing, 2021, 30, 6459-6472.	6.0	18
50	LAU-Net: Latitude Adaptive Upscaling Network for Omnidirectional Image Super-resolution. , 2021, , .		18
51	Bottom-up saliency detection with sparse representation of learnt texture atoms. Pattern Recognition, 2016, 60, 348-360.	5.1	17
52	Rate control schemes for panoramic video coding. Journal of Visual Communication and Image Representation, 2018, 53, 76-85.	1.7	17
53	Saliency-Guided Image Translation. , 2021, , .		17
54	Semantic Perceptual Image Compression With a Laplacian Pyramid of Convolutional Networks. IEEE Transactions on Image Processing, 2021, 30, 4225-4237.	6.0	16

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55	Saliency Prediction on Omnidirectional Image With Generative Adversarial Imitation Learning. IEEE Transactions on Image Processing, 2021, 30, 2087-2102.	6.0	16
56	3D Scene interpretation by combining probability theory and logic: The tower of knowledge. Computer Vision and Image Understanding, 2011, 115, 1581-1596.	3.0	15
57	Saliency-Guided Complexity Control for HEVC Decoding. IEEE Transactions on Broadcasting, 2018, 64, 865-882.	2.5	15
58	Viewport-based CNN: A Multi-task Approach for Assessing 360Â° Video Quality. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, PP, 1-1.	9.7	15
59	Saliency Detection in Face Videos: A Data-Driven Approach. IEEE Transactions on Multimedia, 2018, 20, 1335-1349.	5.2	14
60	Find Who to Look at: Turning From Action to Saliency. IEEE Transactions on Image Processing, 2018, 27, 4529-4544.	6.0	14
61	Fast H.264 to HEVC Transcoding: A Deep Learning Method. IEEE Transactions on Multimedia, 2019, 21, 1633-1645.	5.2	14
62	Accelerate CTU Partition to Real Time for HEVC Encoding With Complexity Control. IEEE Transactions on Image Processing, 2020, 29, 7482-7496.	6.0	14
63	A Kalman Estimation Based Rao-Blackwellized Particle Filtering for Radar Tracking. IEEE Access, 2017, 5, 8162-8174.	2.6	12
64	A DenseNet Based Approach for Multi-frame In-loop Filter in HEVC. , 2019, , .		12
65	An EEG-Based Study on Perception of Video Distortion Under Various Content Motion Conditions. IEEE Transactions on Multimedia, 2020, 22, 949-960.	5.2	12
66	Multi-Modal Convolutional Dictionary Learning. IEEE Transactions on Image Processing, 2022, 31, 1325-1339.	6.0	12
67	Online Dictionary Learning Based Intra-frame Video Coding. Wireless Personal Communications, 2014, 74, 1281-1295.	1.8	11
68	GAN-NL: Unsupervised Representation Learning for Remote Sensing Image Classification. , 2018, , .		11
69	Spatial Attention-Based Non-Reference Perceptual Quality Prediction Network for Omnidirectional Images. , 2021, , .		11
70	Hierarchical Complexity Control of HEVC for Live Video Encoding. IEEE Access, 2016, 4, 7014-7027.	2.6	10
71	A novel rate control scheme for panoramic video coding. , 2017, , .		10
72	Toward Variable-Rate Generative Compression by Reducing the Channel Redundancy. IEEE Transactions on Circuits and Systems for Video Technology, 2020, , 1-1.	5.6	10

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73	Pathology-Aware Deep Network Visualization and Its Application in Glaucoma Image Synthesis. Lecture Notes in Computer Science, 2019, , 423-431.	1.0	10
74	Hierarchical Multinomial Latent Model With G^0 Distribution for Synthetic Aperture Radar Image Semantic Segmentation. IEEE Access, 2018, 6, 31783-31797.	2.6	9
75	Removing Rain in Videos: A Large-Scale Database and a Two-Stream ConvLSTM Approach. , 2019, , .		9
76	Hierarchical Bayesian LSTM for Head Trajectory Prediction on Omnidirectional Images. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 7563-7580.	9.7	9
77	Revisiting Convolutional Sparse Coding for Image Denoising: From a Multi-Scale Perspective. IEEE Signal Processing Letters, 2022, 29, 1202-1206.	2.1	9
78	Cubature Information SMC-PHD for Multi-Target Tracking. Sensors, 2016, 16, 653.	2.1	8
79	Rebuffering Optimization for DASH via Pricing and EEG-Based QoE Modeling. IEEE Journal on Selected Areas in Communications, 2019, 37, 1549-1565.	9.7	8
80	Understanding and Predicting the Memorability of Outdoor Natural Scenes. IEEE Transactions on Image Processing, 2020, 29, 4927-4941.	6.0	8
81	Learning to Predict Salient Faces: A Novel Visual-Audio Saliency Model. Lecture Notes in Computer Science, 2020, , 413-429.	1.0	8
82	A Multipath Routing Algorithm Based on Parametric Probability for Wireless Sensor Networks. , 2009, , .		7
83	A ROI-based bit allocation scheme for HEVC towards perceptual conversational video coding. , 2013, , .		7
84	Learning-Based Saliency Detection of Face Images. IEEE Access, 2017, 5, 6502-6514.	2.6	7
85	Coalition Formation Approaches for Cooperative Networks With SWIPT. IEEE Access, 2017, 5, 17644-17659.	2.6	6
86	An LSTM method for predicting CU splitting in H.264 to HEVC transcoding. , 2017, , .		6
87	Unsupervised User Clustering in Non-orthogonal Multiple Access. , 2019, , .		6
88	Using Minimum Component and CNN for Satellite Remote Sensing Image Cloud Detection. IEEE Geoscience and Remote Sensing Letters, 2021, 18, 2162-2166.	1.4	6
89	DeepCT: A novel deep complex-valued network with learnable transform for video saliency prediction. Pattern Recognition, 2020, 102, 107234.	5.1	6
90	DeepGF: Glaucoma Forecast Using the Sequential Fundus Images. Lecture Notes in Computer Science, 2020, , 626-635.	1.0	6

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91	The Tower of Knowledge Scheme for Learning in Computer Vision. , 2007, , .		5
92	LEARNING LOGIC RULES FOR THE TOWER OF KNOWLEDGE USING MARKOV LOGIC NETWORKS. International Journal of Pattern Recognition and Artificial Intelligence, 2011, 25, 889-907.	0.7	5
93	Image Saliency Detection with Sparse Representation of Learnt Texture Atoms. , 2015, , .		5
94	Attention-Based Deep Reinforcement Learning for Virtual Cinematography of 360^{circ} Videos. IEEE Transactions on Multimedia, 2021, 23, 3227-3238.	5.2	5
95	DeepVS2.0: A Saliency-Structured Deep Learning Method for Predicting Dynamic Visual Attention. International Journal of Computer Vision, 2021, 129, 203-224.	10.9	5
96	Multi-Task Learning-Based Immunofluorescence Classification of Kidney Disease. International Journal of Environmental Research and Public Health, 2021, 18, 10798.	1.2	5
97	Omnidirectional Image Super-Resolution via Latitude Adaptive Network. IEEE Transactions on Multimedia, 2023, 25, 4108-4120.	5.2	5
98	A novel weight-based URQ scheme for perceptual video coding of conversational video in HEVC. , 2014, , .		4
99	Predicting the memorability of natural-scene images. , 2016, , .		4
100	A Deep Neural Network Based Maneuvering-target Tracking Algorithm. , 2019, , .		4
101	Component Identification in the 3D Model of a Building. , 2010, , .		3
102	Complexity control of HEVC based on region-of-interest attention model. , 2014, , .		3
103	A novel objective quality assessment method for perceptual video coding in conversational scenarios. , 2014, , .		3
104	Subjective-quality-optimized complexity control for HEVC decoding. , 2016, , .		3
105	A novel double-layer sparse representation approach for unsupervised dictionary learning. Computer Vision and Image Understanding, 2016, 143, 1-10.	3.0	3
106	Optimizing QoE of Multiple Users over DASH: A Meta-learning Approach. , 2019, , .		3
107	A Meta-Learning Framework for Learning Multi-User Preferences in QoE Optimization of DASH. IEEE Transactions on Circuits and Systems for Video Technology, 2020, 30, 3210-3225.	5.6	3
108	VRFCNN: Virtual Reference Frame Generation Network for Quality SHVC. IEEE Signal Processing Letters, 2020, 27, 2049-2053.	2.1	3

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109	MRS-Net: Multi-Scale Recurrent Scalable Network for Face Quality Enhancement of Compressed Videos. , 2020, , .		3
110	MW-GAN+ for Perceptual Quality Enhancement on Compressed Video. IEEE Transactions on Circuits and Systems for Video Technology, 2022, 32, 4224-4237.	5.6	3
111	Distributed coalition formation algorithms for cooperative broadcast networks with SWIPT. , 2014, , .		2
112	Learning to segment videos in HEVC compressed domain. , 2015, , .		2
113	Subjective rate-distortion optimization in HEVC with perceptual model of multiple faces. , 2015, , .		2
114	What Makes Natural Scene Memorable?. , 2018, , .		2
115	Content-aware Deep Perceptual Image Compression. , 2019, , .		2
116	Introduction to the Issue on Perception-Driven 360Â° Video Processing. IEEE Journal on Selected Topics in Signal Processing, 2020, 14, 2-4.	7.3	2
117	Tower of Knowledge for scene interpretation: A survey. Pattern Recognition Letters, 2014, 48, 42-48.	2.6	1
118	A novel CIF-based SMC-PHD approach for tracking multiple nonlinear targets. , 2015, , .		1
119	A nonlinear and non-Gaussian distributed fusion based on Rao-Blackwellized particle filtering. , 2016, , .		1
120	Boundary Objectness Network for Object Detection and Localization. , 2018, , .		1
121	Learning Diverse Sub-Policies via a Task-Agnostic Regularization on Action Distributions. , 2020, , .		1
122	MRS-Net+ for Enhancing Face Quality of Compressed Videos. IEEE Transactions on Circuits and Systems for Video Technology, 2022, 32, 2881-2894.	5.6	1
123	SRAM-PUF Based Lightweight Mutual Authentication Scheme for IoT. , 2021, , .		1
124	Bi-directional communication with eigenmode sharing. , 2011, , .		0
125	A modified MCMC approach for classifying target and decoy. , 2013, , .		0
126	Unsupervised dictionary learning with double-layer sparse representation. , 2014, , .		0

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127	Component Identification and Interpretation. Advances in Imaging and Electron Physics, 2017, 199, 237-301.	0.1	0
128	Learning Dynamic GMM for Attention Distribution on Single-Face Videos. , 2017, , .		0
129	Temporal dependency based CTU-level bit allocation for rate control. , 2019, , .		0
130	A Blockchain-based Verified Locating Scheme for IoT Devices. , 2021, , .		0