Lap-Pui Chau

List of Publications by Year
in descending order

184 papers	3,286 citations	257450 24 h-index	197818 49 g-index
184 all docs	184 docs citations	184 times ranked	2160 citing authors

#	Article	IF	Citations
1	Deep Spatial-Angular Regularization for Light Field Imaging, Denoising, and Super-Resolution. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 6094-6110.	13.9	29
2	Rethinking and Designing a High-Performing Automatic License Plate Recognition Approach. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 8868-8880.	8.0	25
3	Attention-Guided Progressive Neural Texture Fusion for High Dynamic Range Image Restoration. IEEE Transactions on Image Processing, 2022, 31, 2661-2672.	9.8	10
4	Convolutional Neural Networks With Dynamic Regularization. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 2299-2304.	11.3	14
5	A Self-Training Approach for Point-Supervised Object Detection and Counting in Crowds. IEEE Transactions on Image Processing, 2021, 30, 2876-2887.	9.8	59
6	Dense Point Prediction: A Simple Baseline for Crowd Counting and Localization. , 2021, , .		15
7	Multi-Object Tracking with Tracked Object Bounding Box Association. , 2021, , .		2
8	Remote detection of idling cars using infrared imaging and deep networks. Neural Computing and Applications, 2020, 32, 3047-3057.	5.6	2
9	Surface Consistent Light Field Extrapolation Over Stratified Disparity And Spatial Granularities. , 2020, , .		1
10	RSAN: A Retinex based Self Adaptive Stereo Matching Network for Day and Night Scenes. , 2020, , .		2
11	Deep Spatial-Angular Regularization for Compressive Light Field Reconstruction over Coded Apertures. Lecture Notes in Computer Science, 2020, , 278-294.	1.3	21
12	Convolutional Three-Stream Network Fusion for Driver Fatigue Detection from Infrared Videos. , 2019, , .		5
13	Object Counting in Video Surveillance Using Multi-scale Density Map Regression. , 2019, , .		9
14	Airlight Estimation Based on Distant Region Segmentation. , 2019, , .		3
15	Vehicle Tracking Using Deep SORT with Low Confidence Track Filtering. , 2019, , .		64
16	Light Field Image Compression Based on Bi-Level View Compensation With Rate-Distortion Optimization. IEEE Transactions on Circuits and Systems for Video Technology, 2019, 29, 517-530.	8.3	59
17	Deepsea video descattering. Multimedia Tools and Applications, 2019, 78, 28919-28929.	3.9	6
18	Simultaneous Spatial and Spectral Low-Rank Representation of Hyperspectral Images for Classification. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 2872-2886.	6.3	38

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19	Single Underwater Image Restoration Using Adaptive Attenuation-Curve Prior. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 992-1002.	5.4	110
20	Multimodal Recurrent Neural Networks With Information Transfer Layers for Indoor Scene Labeling. IEEE Transactions on Multimedia, 2018, 20, 1656-1671.	7.2	19
21	Light Field Compression With Disparity-Guided Sparse Coding Based on Structural Key Views. IEEE Transactions on Image Processing, 2018, 27, 314-324.	9.8	61
22	Learning-Based Parallax Transfer on Multispectral Light Field. , 2018, , .		0
23	Robust Video Content Alignment and Compensation for Rain Removal in a CNN Framework. , 2018, , .		119
24	Vision-Based Rain Gauge for Dynamic Scenes. , 2018, , .		1
25	Light Field Denoising via Anisotropic Parallax Analysis in a CNN Framework. IEEE Signal Processing Letters, 2018, 25, 1403-1407.	3.6	38
26	Accurate Light Field Depth Estimation With Superpixel Regularization Over Partially Occluded Regions. IEEE Transactions on Image Processing, 2018, 27, 4889-4900.	9.8	87
27	Reflection Removal on Single Light Field Capture Using Focus Manipulation. IEEE Transactions on Computational Imaging, 2018, 4, 562-572.	4.4	11
28	Idling Car Detection with ConvNets in Infrared Image Sequences. , 2018, , .		3
29	Sparse Low-Rank Matrix Approximation for Data Compression. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 1043-1054.	8.3	24
30	Light Field Compressed Sensing Over a Disparity-Aware Dictionary. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 855-865.	8.3	19
31	Lattice-Support repetitive local feature detection for visual search. Pattern Recognition Letters, 2017, 98, 123-129.	4.2	0
32	Margin maximization for robust classification using deep learning. , 2017, , .		1
33	Sparse representation for colors of 3D point cloud via virtual adaptive sampling. , 2017, , .		19
34	Edge-preserving rain removal for light field images based on RPCA. , 2017, , .		4
35	Reflection removal based on single light field capture. , 2017, , .		14
36	Depth video-based two-stream convolutional neural networks for driver fatigue detection. , 2017, , .		20

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37	Single underwater image restoration using attenuation-curve prior. , 2017, , .		13
38	Light field scene flow with occlusion regularization. , 2017, , .		0
39	Underwater image restoration based on contrast enhancement. , 2016, , .		20
40	Graph-based transform for data decorrelation. , 2016, , .		5
41	Sparsifying orthogonal transforms with compact bases for data compression. , 2016, , .		1
42	Low-latency compression of mocap data using learned spatial decorrelation transform. Computer Aided Geometric Design, 2016, 43, 211-225.	1.2	9
43	Robust laplacian matrix learning for smooth graph signals. , 2016, , .		5
44	Sparse two-dimensional singular value decomposition. , 2016, , .		1
45	Light field depth from multi-scale particle filtering. , 2016, , .		1
46	Facial Position and Expression-Based Human–Computer Interface for Persons With Tetraplegia. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 915-924.	6.3	25
47	Reordering-based transform for compressing human motion capture data. , 2015, , .		1
48	Underwater image color correction based on surface reflectance statistics. , 2015, , .		2
49	A linear dependent rate-quantization model for scalable video enhancement layer encoding. , 2015, , .		0
50	Multiscale Dictionary Learning via Cross-Scale Cooperative Learning and Atom Clustering for Visual Signal Processing. IEEE Transactions on Circuits and Systems for Video Technology, 2015, 25, 1457-1468.	8.3	4
51	Compressing 3-D Human Motions via Keyframe-Based Geometry Videos. IEEE Transactions on Circuits and Systems for Video Technology, 2015, 25, 51-62.	8.3	27
52	Motion capture data recovery using skeleton constrained singular value thresholding. Visual Computer, 2015, 31, 1521-1532.	3.5	15
53	Heavy haze removal in a learning framework. , 2015, , .		1
54	Human Motion Capture Data Tailored Transform Coding. IEEE Transactions on Visualization and Computer Graphics, 2015, 21, 848-859.	4.4	26

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55	Fall Detection Based on Body Part Tracking Using a Depth Camera. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 430-439.	6.3	203
56	A fast adaptive guided filtering algorithm for light field depth interpolation. , 2014, , .		4
57	Dynamic scene rain removal for moving cameras. , 2014, , .		5
58	Single Viewpoint Image-Driven Simplification. International Journal of Image and Graphics, 2014, 14, 1450008.	1.5	0
59	A light field sparse representation structure and its fast coding technique. , 2014, , .		2
60	Human Computer Interface for Quadriplegic People Based on Face Position/gesture Detection. , 2014, , .		2
61	Low-rank based compact representation of motion capture data. , 2014, , .		3
62	A novel compression framework for 3D time-varying meshes. , 2014, , .		8
63	Low Power Motion Estimation Based on Probabilistic Computing. IEEE Transactions on Circuits and Systems for Video Technology, 2014, 24, 1-14.	8.3	2
64	A Rain Pixel Recovery Algorithm for Videos With Highly Dynamic Scenes. IEEE Transactions on Image Processing, 2014, 23, 1097-1104.	9.8	62
65	Restoring corrupted motion capture data via jointly low-rank matrix completion. , 2014, , .		6
66	Scalable and Compact Representation for Motion Capture Data Using Tensor Decomposition. IEEE Signal Processing Letters, 2014, 21, 255-259.	3.6	14
67	A Highly Efficient Compression Framework for Time-Varying 3-D Facial Expressions. IEEE Transactions on Circuits and Systems for Video Technology, 2014, 24, 1541-1553.	8.3	24
68	Rate-Distortion Model Based Bit Allocation for 3-D Facial Compression Using Geometry Video. IEEE Transactions on Circuits and Systems for Video Technology, 2013, 23, 1537-1541.	8.3	8
69	Joint Rate Allocation of Stereoscopic 3D Videos in Next-Generation Broadcast Applications. IEEE Transactions on Broadcasting, 2013, 59, 445-454.	3.2	5
70	Human motion capture data recovery via trajectory-based sparse representation. , 2013, , .		13
71	Human motion capture data recovery using trajectoryâ€based matrix completion. Electronics Letters, 2013, 49, 752-754.	1.0	24
72	Rain removal from dynamic scene based on motion segmentation. , 2013, , .		1

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73	An enhanced window-variant dark channel prior for depth estimation using single foggy image. , 2013, , .		7
74	Expression-invariant and sparse representation for mesh-based compression for 3-D face models. , 2013, , .		1
75	Consistent Video Quality Control in Scalable Video Coding Using Dependent Distortion Quantization Model. IEEE Transactions on Broadcasting, 2013, 59, 717-724.	3.2	11
76	Dynamic 3-D facial compression using low rank and sparse decomposition. , 2012, , .		4
77	Keyframe selection for motion capture using motion activity analysis. , 2012, , .		6
78	Joint rate allocation for statistical multiplexing of SVC. , 2012, , .		2
79	Image-driven simplification with single viewpoint. , 2012, , .		0
80	Fall detection based on skeleton extraction. , 2012, , .		14
81	Joint Rate Allocation for Statistical Multiplexing in Video Broadcast Applications. IEEE Transactions on Broadcasting, 2012, 58, 417-427.	3.2	10
82	A New Rate-Quantization Model for H.264/AVC Low-Delay Rate Control. Lecture Notes in Computer Science, 2012, , 492-500.	1.3	3
83	Motion capture keyframing by motion change manipulation. , 2011, , .		0
84	Integrated Content and Context Analysis for Mobile Landmark Recognition. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1476-1486.	8.3	23
85	Saliency guided image-driven simplification. , 2011, , .		0
86	Fault tolerant design for low power hierarchical search motion estimation algorithms. , 2011, , .		5
87	Content and context information fusion for mobile landmark recognition. , 2011, , .		0
88	Low Power Motion Estimation with Probabilistic Computing. , 2011, , .		6
89	A discriminative learning technique for mobile landmark recognition. , 2011, , .		0
90	A Fuzzy Clustering Algorithm for Virtual Character Animation Representation. IEEE Transactions on Multimedia, 2011, 13, 40-49.	7.2	13

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91	From universal bag-of-words to adaptive bag-of-phrases for mobile scene recognition. , 2011, , .		12
92	Spectral Geometry Image: Image Based 3D Models for Digital Broadcasting Applications. IEEE Transactions on Broadcasting, 2011, 57, 636-645.	3.2	9
93	Image based approach with k-mean clustering for the compression of human motion sequences. , 2011, , .		1
94	Welcome message from technical program chairs. , 2010, , .		0
95	Guest Editorial: Special Issue on Recent Advances in Content Analysis for Media Computing. Journal of Signal Processing Systems, 2010, 59, 139-141.	2.1	0
96	Bit-Rate Allocation for Broadcasting of Scalable Video Over Wireless Networks. IEEE Transactions on Broadcasting, 2010, 56, 288-295.	3.2	14
97	Adaptive resynchronization approach for scalable video over wireless channel. Journal of Visual Communication and Image Representation, 2010, 21, 210-218.	2.8	0
98	Bit allocation for scalable video coding of multiple video programs. , 2010, , .		0
99	Synchronized partial-body motion graphs. , 2010, , .		3
100	Joint Rate Allocation for Multiprogram Video Coding Using FGS. IEEE Transactions on Circuits and Systems for Video Technology, 2010, 20, 829-837.	8.3	15
101	Efficient inter mode decision for H.263 to H.264 video transcoding using support vector machines. , 2009, , .		4
102	Progressive transmission of motion capture data for scalable virtual character animation. , 2009, , .		5
103	A multi-scale learning approach for landmark recognition using mobile devices. , 2009, , .		10
104	Virtual character animation mapping. , 2009, , .		0
105	Streaming 3D meshes using spectral geometry images. , 2009, , .		6
106	A soft MAP framework for blind super-resolution image reconstruction. Image and Vision Computing, 2009, 27, 364-373.	4.5	75
107	Broadcast of scalable video over wireless networks. , 2009, , .		1
108	A Nonlinear L_{1}-Norm Approach for Joint Image Registration and Super-Resolution. IEEE Signal Processing Letters, 2009, 16, 981-984.	3.6	18

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109	An efficient error protection scheme for point based 3-D models over packet erasure network. , 2009, , .		0
110	A learning approach for single-frame face super-resolution. , 2009, , .		2
111	A Novel Hybrid Model Framework to Blind Color Image Deconvolution. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2008, 38, 867-880.	2.9	10
112	GOP-based unequal error protection for scalable video over packet erasure channel. , 2008, , .		0
113	A new color image regularization scheme for blind image deconvolution. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	2
114	Frame Complexity-Based Rate-Quantization Model for H.264/AVC Intraframe Rate Control. IEEE Signal Processing Letters, 2008, 15, 373-376.	3.6	68
115	Intra/Inter Macroblock Mode Decision for Error-Resilient Transcoding. IEEE Transactions on Multimedia, 2008, 10, 97-104.	7.2	10
116	Fast intra mode decision algorithm for H.263 to H.264/AVC transcoding. , 2008, , .		2
117	Bitplane coding technique for 3-D animated meshes. , 2008, , .		0
118	Spatial resolution decision in scalable bitstream extraction for network and receiver aware adaptation. , 2008, , .		2
119	Improved Frame Level MAD Prediction and Bit Allocation Scheme for H.264/AVC Rate Control. , 2007, , .		6
120	Partial Distortion Search Algorithm Using Predictive Search Area for Fast Full-Search Motion Estimation. IEEE Signal Processing Letters, 2007, 14, 840-843.	3.6	13
121	A Motion-Based Selective Error Protection Method for Scalable Video Over Error-Prone Channel. , 2007, , .		0
122	Joint Image Registration and Super-Resolution using Nonlinear Least Squares Method. , 2007, , .		6
123	Two-Dimensional Channel Coding Scheme for MCTF-Based Scalable Video Coding. IEEE Transactions on Multimedia, 2007, 9, 37-45.	7.2	22
124	A Resizing Algorithm With Two-Stage Realization for DCT-Based Transcoding. IEEE Transactions on Circuits and Systems for Video Technology, 2007, 17, 248-253.	8.3	16
125	A Nonlinear Least Square Technique for Simultaneous Image Registration and Super-Resolution. IEEE Transactions on Image Processing, 2007, 16, 2830-2841.	9.8	94
126	Blind Super-Resolution Image Reconstruction using a Maximum a Posteriori Estimation. , 2006, , .		19

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127	Error-Resilient Coding of H.264 Based on Periodic Macroblock. IEEE Transactions on Broadcasting, 2006, 52, 223-229.	3.2	18
128	The realization of arbitrary downsizing video transcoding. IEEE Transactions on Circuits and Systems for Video Technology, 2006, 16, 540-546.	8.3	14
129	A Novel Resynchronization Method for Scalable Video Over Wireless Channel. , 2006, , .		1
130	GOP-based channel rate allocation using genetic algorithm for scalable video streaming over error-prone networks. IEEE Transactions on Image Processing, 2006, 15, 1323-1330.	9.8	68
131	Region-Based Image Retrieval using Radial Basis Function Network. , 2006, , .		5
132	Efficient Fine Granularity Scalability Using Adaptive Leaky Factor. IEEE Transactions on Broadcasting, 2005, 51, 512-519.	3.2	1
133	Efficient content-based resynchronization approach for wireless video. IEEE Transactions on Multimedia, 2005, 7, 1021-1027.	7.2	3
134	Blind color image deconvolution based on wavelet decomposition. , 2005, , .		0
135	Efficient motion vector recovery algorithm for H.264 based on a polynomial model. IEEE Transactions on Multimedia, 2005, 7, 507-513.	7.2	39
136	An error-resilient GOP structure for robust video transmission. IEEE Transactions on Multimedia, 2005, 7, 1131-1138.	7.2	16
137	Content-Based Resynchronization for Robust Video Transmission. IEEE Transactions on Broadcasting, 2004, 50, 390-395.	3.2	1
138	Efficient inner search for faster diamond search. Signal Processing, 2004, 84, 527-533.	3.7	1
139	An Efficient Arbitrary Downsizing Algorithm for Video Transcoding. IEEE Transactions on Circuits and Systems for Video Technology, 2004, 14, 887-891.	8.3	38
140	A motion vector recovery algorithm for digital video using lagrange interpolation. IEEE Transactions on Broadcasting, 2003, 49, 383-389.	3.2	56
141	A fast octagon-based search algorithm for motion estimation. Signal Processing, 2003, 83, 671-675.	3.7	26
142	Smooth constrained motion estimation for video coding. Signal Processing, 2003, 83, 677-680.	3.7	18
143	Efficient multiplier structure for realization of the discrete cosine transform. Signal Processing: Image Communication, 2003, 18, 527-536.	3.2	4
144	Hexagon-based search pattern for fast block motion estimation. IEEE Transactions on Circuits and Systems for Video Technology, 2002, 12, 349-355.	8.3	688

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145	Arbitrary downsizing video transcoding using fast motion vector reestimation. IEEE Signal Processing Letters, 2002, 9, 352-355.	3.6	32
146	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.	2.2	1
147	Efficient recursive algorithm for the inverse discrete cosine transform. IEEE Signal Processing Letters, 2000, 7, 276-277.	3.6	9
148	Transform domain recursive algorithm to compute discrete cosine and sine transforms. International Journal of Electronics, 1996, 80, 433-439.	1.4	1
149	Concurrent computation of two-dimensional discrete cosine transform. Circuits, Systems, and Signal Processing, 1996, 15, 597-607.	2.0	1
150	Direct formulation for the realization of discrete cosine transform using recursive structure. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1995, 42, 50-52.	2.2	15
151	Efficient implementation of discrete cosine transform using recursive filter structure. IEEE Transactions on Circuits and Systems for Video Technology, 1994, 4, 550-552.	8.3	25
152	An efficient spatial domain error concealment method for H.264 video. , 0, , .		1
153	An optimized diamond search algorithm for block motion estimation. , 0, , .		5
154	New 2/sup n/ discrete cosine transform algorithm using recursive filter structure. , 0, , .		0
155	An MPEG-4 real-time video decoder software. , 0, , .		2
156	Recursive algorithm for the realization of the discrete cosine transform. , 0, , .		2
157	A novel hexagon-based search algorithm for fast block motion estimation. , 0, , .		42
158	Motion vector re-estimation for fractional-scale video transcoding. , 0, , .		8
159	Fine granular scalability video over wireless communication networks. , 0, , .		0
160	A temporal error concealment algorithm for H.264 based on plane estimation. , 0, , .		0
161	An enhanced hexagonal search algorithm for block motion estimation. , 0, , .		9
162	Efficient three-step search algorithm for block motion estimation in video coding. , 0, , .		11

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163	Smooth constrained block matching criterion for motion estimation. , 0, , .		1
164	An efficient fine granularity scalable coding scheme using adaptive leaky prediction. , 0, , .		3
165	A novel resynchronization marker positioning approach for robust video transmission. , 0, , .		1
166	Reducing drift for FGS coding based on multiframe motion compensation [video coding]. , 0, , .		1
167	Frame-skipping transcoding with motion change consideration. , 0, , .		7
168	Content-based periodic macroblock for error-resilient transmission of H.264 video. , 0, , .		0
169	Adaptive fine granularity scalable coding for video streaming. , 0, , .		0
170	A temporal error concealment algorithm for H.264 using Lagrange interpolation. , 0, , .		27
171	An efficient resynchronization technique for perceptual quality enhancement for robust video transmission. , 0, , .		0
172	An efficient inter mode decision approach for H.264 video coding. , 0, , .		20
173	Variable Frame Rate Transcoding Considering Motion Information. , 0, , .		3
174	A New Scene Change Feature for Video Transcoding. , 0, , .		2
175	Robust Group-of-Picture Architecture for Video Transmission over Error-Prone Channels. , 0, , .		1
176	A Novel Interleaving Algorithm for Robust Video Transmission. , 0, , .		1
177	Frame Layer Bit Allocation for Video Transcoding. , 0, , .		0
178	Frame Size Selection in Video Downsizing Transcoding Application. , 0, , .		0
179	Optimal Resynchronization for Layered Video over Wireless Channel. , 0, , .		0
180	A Novel Unequal Error Protection Approach for Error Resilient Video Transmission. , 0, , .		21

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181	Multiple Description Coding Using Multiple Reference Frame for Robust Video Transmission. , 0, , .		4
182	Two-dimensional channel rate allocation for SVC over error-prone channel. , 0, , .		3
183	A novel intra-rate estimation method for H.264 rate control. , 0, , .		23
184	Generalized arbitrary resizing for video transcoding. , 0, , .		1