

Gene Cheung

List of Publications by Year in descending order

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Version: 2024-02-01

113
papers

2,650
citations

257101

24
h-index

243296

44
g-index

115
all docs

115
docs citations

115
times ranked

1417
citing authors

#	ARTICLE	IF	CITATIONS
1	Graph Spectral Image Processing. Proceedings of the IEEE, 2018, 106, 907-930.	16.4	166
2	Graph Laplacian Regularization for Image Denoising: Analysis in the Continuous Domain. IEEE Transactions on Image Processing, 2017, 26, 1770-1785.	6.0	165
3	Multiresolution Graph Fourier Transform for Compression of Piecewise Smooth Images. IEEE Transactions on Image Processing, 2015, 24, 419-433.	6.0	157
4	Graph-Based Blind Image Deblurring From a Single Photograph. IEEE Transactions on Image Processing, 2019, 28, 1404-1418.	6.0	115
5	Random Walk Graph Laplacian-Based Smoothness Prior for Soft Decoding of JPEG Images. IEEE Transactions on Image Processing, 2017, 26, 509-524.	6.0	111
6	Interactive Streaming of Stored Multiview Video Using Redundant Frame Structures. IEEE Transactions on Image Processing, 2011, 20, 744-761.	6.0	92
7	3D Point Cloud Denoising Using Graph Laplacian Regularization of a Low Dimensional Manifold Model. IEEE Transactions on Image Processing, 2020, 29, 3474-3489.	6.0	82
8	Sampling Signals on Graphs: From Theory to Applications. IEEE Signal Processing Magazine, 2020, 37, 14-30.	4.6	78
9	On Dependent Bit Allocation for Multiview Image Coding With Depth-Image-Based Rendering. IEEE Transactions on Image Processing, 2011, 20, 3179-3194.	6.0	74
10	Depth map denoising using graph-based transform and group sparsity. , 2013, , .		68
11	SiGAN: Siamese Generative Adversarial Network for Identity-Preserving Face Hallucination. IEEE Transactions on Image Processing, 2019, 28, 6225-6236.	6.0	62
12	Point Cloud Denoising via Feature Graph Laplacian Regularization. IEEE Transactions on Image Processing, 2020, 29, 4143-4158.	6.0	59
13	Intra-Prediction and Generalized Graph Fourier Transform for Image Coding. IEEE Signal Processing Letters, 2015, 22, 1913-1917.	2.1	58
14	Depth map compression using multi-resolution graph-based transform for depth-image-based rendering. , 2012, , .		54
15	Feature Graph Learning for 3D Point Cloud Denoising. IEEE Transactions on Signal Processing, 2020, 68, 2841-2856.	3.2	53
16	Arbitrarily Shaped Motion Prediction for Depth Video Compression Using Arithmetic Edge Coding. IEEE Transactions on Image Processing, 2014, 23, 4696-4708.	6.0	47
17	Optimal graph laplacian regularization for natural image denoising. , 2015, , .		45
18	Distributed source coding techniques for interactive multiview video streaming. , 2009, , .		44

#	ARTICLE	IF	CITATIONS
19	Graph-based Dequantization of Block-Compressed Piecewise Smooth Images. IEEE Signal Processing Letters, 2016, 23, 242-246.	2.1	44
20	Image Bit-Depth Enhancement via Maximum <i>A Posteriori</i> Estimation of AC Signal. IEEE Transactions on Image Processing, 2016, 25, 2896-2909.	6.0	42
21	Delay-Cognizant Interactive Streaming of Multiview Video With Free Viewpoint Synthesis. IEEE Transactions on Multimedia, 2012, 14, 1109-1126.	5.2	39
22	Arithmetic edge coding for arbitrarily shaped sub-block motion prediction in depth video compression. , 2012, , .		35
23	Bipartite Approximation for Graph Wavelet Signal Decomposition. IEEE Transactions on Signal Processing, 2017, 65, 5466-5480.	3.2	35
24	Loss-Resilient Coding of Texture and Depth for Free-Viewpoint Video Conferencing. IEEE Transactions on Multimedia, 2014, 16, 711-725.	5.2	32
25	Estimating Heart Rate and Rhythm via 3D Motion Tracking in Depth Video. IEEE Transactions on Multimedia, 2017, 19, 1625-1636.	5.2	31
26	Collaborative Wireless Freeview Video Streaming With Network Coding. IEEE Transactions on Multimedia, 2016, 18, 521-536.	5.2	29
27	Graph-Based Joint Dequantization and Contrast Enhancement of Poorly Lit JPEG Images. IEEE Transactions on Image Processing, 2019, 28, 1205-1219.	6.0	29
28	Fast Graph Sampling Set Selection Using Gershgorin Disc Alignment. IEEE Transactions on Signal Processing, 2020, 68, 2419-2434.	3.2	28
29	Depth map coding using graph based transform and transform domain sparsification. , 2011, , .		27
30	Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. IEEE Transactions on Signal Processing, 2019, 67, 5511-5526.	3.2	27
31	Redefining self-similarity in natural images for denoising using graph signal gradient. , 2014, , .		24
32	In-Network View Synthesis for Interactive Multiview Video Systems. IEEE Transactions on Multimedia, 2016, 18, 852-864.	5.2	23
33	Inter-block consistent soft decoding of JPEG images with sparsity and graph-signal smoothness priors. , 2015, , .		21
34	3D Point Cloud Super-Resolution via Graph Total Variation on Surface Normals. , 2019, , .		21
35	Error concealment by data partitioning. Signal Processing: Image Communication, 1999, 14, 505-518.	1.8	20
36	Expansion hole filling in depth-image-based rendering using graph-based interpolation. , 2013, , .		19

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37	A-Optimal Sampling and Robust Reconstruction for Graph Signals via Truncated Neumann Series. IEEE Signal Processing Letters, 2018, 25, 680-684.	2.1	19
38	Robust Semisupervised Graph Classifier Learning With Negative Edge Weights. IEEE Transactions on Signal and Information Processing Over Networks, 2018, 4, 712-726.	1.6	19
39	Reference Frame Optimization for Multiple-Path Video Streaming With Complexity Scaling. IEEE Transactions on Circuits and Systems for Video Technology, 2007, 17, 649-662.	5.6	18
40	Generation of redundant frame structure for interactive multiview streaming. , 2009, , .		18
41	Low-Cost Eye Gaze Prediction System for Interactive Networked Video Streaming. IEEE Transactions on Multimedia, 2013, 15, 1865-1879.	5.2	18
42	Coding structure optimization for interactive multiview streaming in virtual world observation. , 2008, , .		16
43	Coding Structure and Replication Optimization for Interactive Multiview Video Streaming. IEEE Transactions on Multimedia, 2014, 16, 1874-1887.	5.2	16
44	Designing sparse graphs via structure tensor for block transform coding of images. , 2015, , .		16
45	Edge-adaptive depth map coding with lifting transform on graphs. , 2015, , .		16
46	Multi-stream switching for interactive virtual reality video streaming. , 2017, , .		16
47	Prior-Based Quantization Bin Matching for Cloud Storage of JPEG Images. IEEE Transactions on Image Processing, 2018, 27, 3222-3235.	6.0	16
48	Adaptive Nonrigid Inpainting of Three-Dimensional Point Cloud Geometry. IEEE Signal Processing Letters, 2018, 25, 878-882.	2.1	16
49	MUVIS: Multi-source video streaming service over WLANs. Journal of Communications and Networks, 2005, 7, 144-156.	1.8	15
50	Arbitrarily shaped sub-block motion prediction in texture map compression using depth information. , 2012, , .		14
51	On Constructing γ -Dimensional DIBR-Synthesized Images. IEEE Transactions on Multimedia, 2016, 18, 1453-1468.	5.2	14
52	Real-time video transport optimization using streaming agent over 3G wireless networks. IEEE Transactions on Multimedia, 2005, 7, 777-785.	5.2	13
53	Optimized frame structure using distributed source coding for interactive multiview video streaming. , 2009, , .		13
54	Video Error Concealment Using a Computation-Efficient Low Saliency Prior. IEEE Transactions on Multimedia, 2013, 15, 2099-2113.	5.2	13

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55	Context Tree-Based Image Contour Coding Using a Geometric Prior. IEEE Transactions on Image Processing, 2017, 26, 574-589.	6.0	13
56	Object Shape Approximation and Contour Adaptive Depth Image Coding for Virtual View Synthesis. IEEE Transactions on Circuits and Systems for Video Technology, 2018, 28, 3437-3451.	5.6	13
57	3D Point Cloud Color Denoising Using Convex Graph-Signal Smoothness Priors. , 2019, , .		13
58	Smart Media Striping Over Multiple Burst-Loss Channels. IEEE Journal on Selected Topics in Signal Processing, 2007, 1, 319-333.	7.3	11
59	Navigation Domain Representation For Interactive Multiview Imaging. IEEE Transactions on Image Processing, 2013, 22, 3459-3472.	6.0	11
60	Rate-Constrained 3D Surface Estimation From Noise-Corrupted Multiview Depth Videos. IEEE Transactions on Image Processing, 2014, 23, 3138-3151.	6.0	11
61	Anchor View Allocation for Collaborative Free Viewpoint Video Streaming. IEEE Transactions on Multimedia, 2015, 17, 307-322.	5.2	11
62	Alternating Binary Classifier and Graph Learning from Partial Labels. , 2018, , .		11
63	Super-Resolution of 3D Color Point Clouds Via Fast Graph Total Variation. , 2020, , .		11
64	Pre-demosaic light field image compression using graph lifting transform. , 2017, , .		10
65	Graph Learning Based Head Movement Prediction for Interactive 360 Video Streaming. IEEE Transactions on Image Processing, 2021, 30, 4622-4636.	6.0	10
66	Unrolling of Deep Graph Total Variation for Image Denoising. , 2021, , .		10
67	On the complexity of cooperative peer-to-peer repair for wireless broadcasting. IEEE Communications Letters, 2006, 10, 742-744.	2.5	9
68	Image interpolation for DIBR viewsynthesis using graph fourier transform. , 2014, , .		9
69	Optimal Lagrange multipliers for dependent rate allocation in video coding. Signal Processing: Image Communication, 2018, 63, 113-124.	1.8	9
70	On media data structures for interactive streaming in immersive applications. Proceedings of SPIE, 2010, , .	0.8	8
71	Reconstruction-cognizant Graph Sampling Using Gershgorin Disc Alignment. , 2019, , .		8
72	Graph Sampling for Matrix Completion Using Recurrent Gershgorin Disc Shift. IEEE Transactions on Signal Processing, 2020, 68, 2814-2829.	3.2	8

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73	Optimal frame structure design using landmarks for interactive light field streaming. , 2012, , .		7
74	Rate-distortion optimized merge frame using piecewise constant functions. , 2013, , .		7
75	Progressive communication for interactive light field image data streaming. , 2017, , .		7
76	Blind Image Deblurring Via Reweighted Graph Total Variation. , 2018, , .		7
77	Fast & Robust Image Interpolation Using Gradient Graph Laplacian Regularizer. , 2021, , .		7
78	Merge Frame Design for Video Stream Switching Using Piecewise Constant Functions. IEEE Transactions on Image Processing, 2016, 25, 3489-3504.	6.0	6
79	Contour approximation & depth image coding for virtual view synthesis. , 2015, , .		5
80	Graph-Based Joint Signal/Power Restoration for Energy Harvesting Wireless Sensor Networks. , 2017, , .		5
81	Deep Graph Regularized Learning for Binary Classification. , 2019, , .		5
82	Graph Metric Learning via Gershgorin Disc Alignment. , 2020, , .		5
83	Robust Deep Graph Based Learning for Binary Classification. IEEE Transactions on Signal and Information Processing Over Networks, 2021, 7, 322-335.	1.6	5
84	3-D Motion Estimation for Visual Saliency Modeling. IEEE Signal Processing Letters, 2013, 20, 972-975.	2.1	4
85	Precision Enhancement of 3-D Surfaces from Compressed Multiview Depth Maps. IEEE Signal Processing Letters, 2015, 22, 1676-1680.	2.1	4
86	Sampling Of 3d Point Cloud Via Gershgorin Disc Alignment. , 2020, , .		4
87	Graph Neural Net Using Analytical Graph Filters and Topology Optimization for Image Denoising. , 2020, , .		4
88	Pre-Demosaic Graph-Based Light Field Image Compression. IEEE Transactions on Image Processing, 2022, 31, 1816-1829.	6.0	4
89	Rate-distortion based reconstruction optimization in distributed source coding for interactive multiview video streaming. , 2010, , .		3
90	On the Complexity of System Throughput Derivation for Static 802.11 Networks. IEEE Communications Letters, 2010, 14, 906-908.	2.5	3

#	ARTICLE	IF	CITATIONS
91	Graph-based representation and coding of 3D images for interactive multiview navigation. , 2016, , .		3
92	3D Point Cloud Enhancement Using Graph-Modelled Multiview Depth Measurements. , 2020, , .		3
93	Sparse Directed Graph Learning for Head Movement Prediction in 360 Video Streaming. , 2020, , .		3
94	Corrections to "Structured Network Coding and Cooperative Wireless Ad-Hoc Peer-to-Peer Repair for WWAN Video Broadcast" [Jun 09 730-741. IEEE Transactions on Multimedia, 2010, 12, 224-225.	5.2	2
95	Optimizing landmark insertions for interactive light field streaming. , 2017, , .		2
96	Joint Denoising/Compression of Image Contours via Shape Prior and Context Tree. IEEE Transactions on Image Processing, 2018, 27, 3332-3344.	6.0	2
97	Learning Sparse Graph Laplacian with K Eigenvector Prior via Iterative Glasso and Projection. , 2021, , .		2
98	Point Cloud Video Super-Resolution via Partial Point Coupling and Graph Smoothness. IEEE Transactions on Image Processing, 2022, 31, 4117-4132.	6.0	2
99	Fast Computation of Generalized Eigenvectors for Manifold Graph Embedding. , 2022, , .		2
100	Incentive analysis for cooperative interactive multiview video streaming. Signal Processing: Image Communication, 2014, 29, 641-666.	1.8	1
101	Peer-to-peer error recovery for wireless video broadcasting. Peer-to-Peer Networking and Applications, 2015, 8, 822-834.	2.6	1
102	Joint denoising / compression of image contours via geometric prior and variable-length context tree. , 2016, , .		1
103	Soft Decoding of Light Field Images Using Pocs and Fast Graph Spectrayl Filters. , 2018, , .		1
104	Non-Local Graph-Based Prediction for Reversible Data Hiding in Images. , 2018, , .		1
105	Fast Sampling of Graph Signals with Noise via Neumann Series Conversion. , 2019, , .		1
106	Fast Graph Sampling for Short Video Summarization Using Gershgorin Disc Alignment. , 2022, , .		1
107	Linear-Time Sampling on Signed Graphs Via Gershgorin Disc Perfect Alignment. , 2022, , .		1
108	Guest editorial: Advances in 3D video processing. Journal of Visual Communication and Image Representation, 2014, 25, 597-598.	1.7	0

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109	Introduction to the Issue on Interactive Media Processing for Immersive Communication. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 381-383.	7.3	0
110	Introduction of New Associate Editors. IEEE Transactions on Circuits and Systems for Video Technology, 2016, 26, 253-263.	5.6	0
111	Path Coding on Geometric Planar Graph for 2D / 3D Visual Data Partitioning. , 2018, , .		0
112	Joint Demosaicking / Rectification Of Fisheye Camera Images Using Multi-Color Graph Laplacian Regularization. , 2020, , .		0
113	Fast Manifold Landmarking Using Extreme Eigen-Pairs. , 2021, , .		0