Aggelos K Katsaggelos

List of Publications by Year
in descending order

172 papers	5,318 citations	186209 28 h-index	102432 66 g-index
178 all docs	178 docs citations	178 times ranked	4591 citing authors

#	Article	IF	Citations
1	Scalable Variational Gaussian Processes for Crowdsourcing: Glitch Detection in LIGO. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 1534-1551.	9.7	10
2	A Learning-Based Physical Model of Charge Transport in Room-Temperature Semiconductor Detectors. IEEE Transactions on Nuclear Science, 2022, 69, 2-16.	1.2	6
3	CoCross: An ICT Platform Enabling Monitoring Recording and Fusion of Clinical Information Chest Sounds and Imaging of COVID-19 ICU Patients. Healthcare (Switzerland), 2022, 10, 276.	1.0	5
4	Automated Lung Sound Classification Using a Hybrid CNN-LSTM Network and Focal Loss Function. Sensors, 2022, 22, 1232.	2.1	55
5	Bayesian K-SVD for H and E blind color deconvolution. Applications to stain normalization, data augmentation and cancer classification. Computerized Medical Imaging and Graphics, 2022, 97, 102048.	3.5	9
6	Deep Gaussian processes for multiple instance learning: Application to CT intracranial hemorrhage detection. Computer Methods and Programs in Biomedicine, 2022, 219, 106783.	2.6	12
7	Anxiety, Post–COVID-19 Syndrome-Related Depression, and Suicidal Thoughts and Behaviors in COVID-19 Survivors: Cross-sectional Study. JMIR Formative Research, 2022, 6, e36656.	0.7	9
8	Reconstruction of Resting State FMRI Using LSTM Variational Auto-Encoder on Subcortical Surface to Detect Epilepsy. , 2022, , .		0
9	Labeling Noncontrast Head CT Reports for Common Findings Using Natural Language Processing. American Journal of Neuroradiology, 2022, 43, 721-726.	1.2	2
10	The Prevalence of Psychotic Symptoms, Violent Ideation, and Disruptive Behavior in a Population With SARS-CoV-2 Infection: Preliminary Study. JMIR Formative Research, 2022, 6, e36444.	0.7	3
11	State-of-the-Art Deep Learning Methods on Electrocardiogram Data: Systematic Review. JMIR Medical Informatics, 2022, 10, e38454.	1.3	14
12	Editorial: Introduction to the Special Issue on Deep Learning for High-Dimensional Sensing. IEEE Journal on Selected Topics in Signal Processing, 2022, 16, 603-607.	7.3	2
13	Development of a highly mobile and versatile large <scp>MA–XRF</scp> scanner for in situ analyses of painted work of arts. X-Ray Spectrometry, 2021, 50, 263-271.	0.9	18
14	Automated Atrial Fibrillation Detection using a Hybrid CNN-LSTM Network on Imbalanced ECG Datasets. Biomedical Signal Processing and Control, 2021, 63, 102194.	3.5	158
15	DeepCOVID-XR: An Artificial Intelligence Algorithm to Detect COVID-19 on Chest Radiographs Trained and Tested on a Large U.S. Clinical Data Set. Radiology, 2021, 299, E167-E176.	3.6	112
16	Transfer learning for predicting conversion from mild cognitive impairment to dementia of Alzheimer's type based on a three-dimensional convolutional neural network. Neurobiology of Aging, 2021, 99, 53-64.	1.5	34
17	Rapid reconstruction of highly undersampled, non–Cartesian real–time cine<i>k</i>–space data using a perceptual complex neural network (PCNN). NMR in Biomedicine, 2021, 34, e4405.	1.6	16
18	Bayesian analysis of depth resolved OCT attenuation coefficients. Scientific Reports, 2021, 11, 2263.	1.6	6

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19	Learning from crowds in digital pathology using scalable variational Gaussian processes. Scientific Reports, 2021, 11, 11612.	1.6	22
20	Geometric deep learning on brain shape predicts sex and age. Computerized Medical Imaging and Graphics, 2021, 91, 101939.	3.5	13
21	An Adaptive Video Acquisition Scheme for Object Tracking and Its Performance Optimization. IEEE Sensors Journal, 2021, 21, 17227-17243.	2.4	3
22	Automatic Classification of A-Lines in Intravascular OCT Images Using Deep Learning and Estimation of Attenuation Coefficients. Applied Sciences (Switzerland), 2021, 11, 7412.	1.3	4
23	Guided Event Filtering: Synergy between Intensity Images and Neuromorphic Events for High Performance Imaging. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, PP, 1-1.	9.7	9
24	Deep learning approaches to inverse problems in imaging: Past, present and future. , 2021, 119, 103285.		7
25	Blind color deconvolution, normalization, and classification of histological images using general super Gaussian priors and Bayesian inference. Computer Methods and Programs in Biomedicine, 2021, 211, 106453.	2.6	16
26	Variational Bayesian Blind Color Deconvolution of Histopathological Images. IEEE Transactions on Image Processing, 2020, 29, 2026-2036.	6.0	12
27	Variational Bayesian Pansharpening with Super-Gaussian Sparse Image Priors. Sensors, 2020, 20, 5308.	2.1	2
28	A single video super-resolution GAN for multiple downsampling operators based on pseudo-inverse image formation models. , 2020, 104, 102801.		15
29	Rapid Reconstruction of Four-dimensional MR Angiography of the Thoracic Aorta Using a Convolutional Neural Network. Radiology: Cardiothoracic Imaging, 2020, 2, e190205.	0.9	7
30	Super Gaussian Priors for Blind Color Deconvolution of Histological Images. , 2020, , .		2
31	Temporal capsule networks for video motion estimation and error concealment. Signal, Image and Video Processing, 2020, 14, 1369-1377.	1.7	3
32	A TV-based image processing framework for blind color deconvolution and classification of histological images. , 2020, 101, 102727.		14
33	Interpretation of Brain Morphology in Association to Alzheimer's Disease Dementia Classification Using Graph Convolutional Networks on Triangulated Meshes. Lecture Notes in Computer Science, 2020, 12474, 95-107.	1.0	6
34	Pigment Unmixing of Hyperspectral Images of Paintings Using Deep Neural Networks. , 2019, , .		9
35	Direct Estimation of Weights and Efficient Training of Deep Neural Networks without SGD. , 2019, , .		0
36	Generative Adversarial Networks and Perceptual Losses for Video Super-Resolution. IEEE Transactions on Image Processing, 2019, 28, 3312-3327.	6.0	118

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37	Spatially Adaptive Losses for Video Super-resolution with GANs. , 2019, , .		2
38	Neural Networks for Modeling Neural Spiking in S1 Cortex. Frontiers in Systems Neuroscience, 2019, 13, 13.	1.2	11
39	Variational EM method for blur estimation using the spike-and-slab image prior. , 2019, 88, 116-129.		9
40	Variational Bayes Color Deconvolution with a Total Variation Prior. , 2019, , .		2
41	Semantic Prior Based Generative Adversarial Network for Video Super-Resolution. , 2019, , .		2
42	Neuroimaging modality fusion in Alzheimer's classification using convolutional neural networks. PLoS ONE, 2019, 14, e0225759.	1.1	38
43	Learning from crowds with variational Gaussian processes. Pattern Recognition, 2019, 88, 298-311.	5.1	28
44	Scalable and efficient learning from crowds with Gaussian processes. Information Fusion, 2019, 52, 110-127.	11.7	15
45	Multiple-Degradation Video Super-Resolution with Direct Inversion of the Low-Resolution Formation Model. , 2019, , .		1
46	Using Deep Neural Networks for Inverse Problems in Imaging: Beyond Analytical Methods. IEEE Signal Processing Magazine, 2018, 35, 20-36.	4.6	407
47	Innovative data reduction and visualization strategy for hyperspectral imaging datasets using t-SNE approach. Pure and Applied Chemistry, 2018, 90, 493-506.	0.9	36
48	Image super-resolution for outdoor digital forensics. Usability and legal aspects. Computers in Industry, 2018, 98, 34-47.	5.7	3
49	An automatic system for the comprehensive retrospective analysis of cardiac rhythms in resuscitation episodes. Resuscitation, 2018, 122, 6-12.	1.3	8
50	Blind Color Deconvolution of Histopathological Images Using a Variational Bayesian Approach. , 2018, , .		4
51	A Novel OCT Design for Cultural Heritage Applications. Microscopy and Microanalysis, 2018, 24, 2142-2143.	0.2	0
52	Probabilistic Matrix Completion for Image Phase Retrieval. , 2018, , .		0
53	Generative Adversarial Networks and Perceptual Losses for Video Super-Resolution. , 2018, , .		25
54	Nonlinear Unmixing of Hyperspectral Datasets for the Study of Painted Works of Art. Angewandte Chemie - International Edition, 2018, 57, 10910-10914.	7.2	14

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55	Nonlinear Unmixing of Hyperspectral Datasets for the Study of Painted Works of Art. Angewandte Chemie, 2018, 130, 11076-11080.	1.6	18
56	Computational multifocal microscopy. Biomedical Optics Express, 2018, 9, 6477.	1.5	14
57	Deep multi-view models for glitch classification. , 2017, , .		14
58	Bayesian K-SVD Using Fast Variational Inference. IEEE Transactions on Image Processing, 2017, 26, 3344-3359.	6.0	25
59	A Logarithmic X-Ray Imaging Model for Baggage Inspection: Simulation and Object Detection. , 2017, , .		23
60	A bayesian multi-frame image super-resolution algorithm using the Gaussian Information Filter. , 2017, , .		5
61	Fast Bayesian blind deconvolution with Huber Super Gaussian priors. , 2017, 60, 122-133.		19
62	Rapid alignment of nanotomography data using joint iterative reconstruction and reprojection. Scientific Reports, 2017, 7, 11818.	1.6	75
63	Greedy Bayesian double sparsity dictionary learning. , 2017, , .		0
64	Parameter estimation in spike and slab variational inference for blind image deconvolution. , 2017, , .		1
65	Passive millimeter wave image classification with large scale Gaussian processes. , 2017, , .		3
66	Shape-from-Shifting: Uncalibrated Photometric Stereo with a Mobile Device. , 2017, , .		3
67	Variational Gaussian process for missing label crowdsourcing classification problems. , 2016, , .		0
68	Compressed sensing super resolution of color images. , 2016, , .		2
69	Video Super-Resolution With Convolutional Neural Networks. IEEE Transactions on Computational Imaging, 2016, 2, 109-122.	2.6	451
70	Joint Data Filtering and Labeling Using Gaussian Processes and Alternating Direction Method of Multipliers. IEEE Transactions on Image Processing, 2016, 25, 3059-3072.	6.0	3
71	Computational Imaging for Cultural Heritage: Recent developments in spectral imaging, 3-D surface measurement, image relighting, and X-ray mapping. IEEE Signal Processing Magazine, 2016, 33, 130-138.	4.6	18
72	Multi-model robust error correction for face recognition. , 2016, , .		2

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73	Multiframe blind deconvolution of passive millimeter wave images using variational dirichlet blur kernel estimation. , 2016, , .		5
74	Bayesian logistic regression with sparse general representation prior for multispectral image classification. , 2016, , .		1
75	Classification of multiple annotator data using variational Gaussian process inference. , 2016, , .		1
76	Automatic cardiac rhythm interpretation during resuscitation. Resuscitation, 2016, 102, 44-50.	1.3	12
77	PMMW image super resolution from compressed sensing observations. , 2015, , .		2
78	High spatio-temporal resolution video with compressed sensing. Optics Express, 2015, 23, 15992.	1.7	68
79	Image super-resolution from compressed sensing observations. , 2015, , .		4
80	Variational Gaussian process for sensor fusion. , 2015, , .		3
81	Video compressive sensing with on-chip programmable subsampling. , 2015, , .		7
82	Sampling optimization for on-chip compressive video. , 2015, , .		4
83	Robust Recovery of Temporally Smooth Signals From Under-Determined Multiple Measurements. IEEE Transactions on Signal Processing, 2015, 63, 1779-1791.	3.2	11
84	Cardiac magnetic resonance image-based classification of the risk of arrhythmias in post-myocardial infarction patients. Artificial Intelligence in Medicine, 2015, 64, 205-215.	3.8	47
85	Variational Bayesian Blind Image Deconvolution: A review. , 2015, 47, 116-127.		56
86	Variational Dirichlet Blur Kernel Estimation. IEEE Transactions on Image Processing, 2015, 24, 5127-5139.	6.0	26
87	Dynamics and heterogeneity of a fate determinant during transition towards cell differentiation. ELife, 2015, 4, .	2.8	41
88	Variational Bayesian causal connectivity analysis for fMRI. Frontiers in Neuroinformatics, 2014, 8, 45.	1.3	10
89	Learning filters in Gaussian process classification problems. , 2014, , .		1
90	Directionally adaptive cubic-spline interpolation using optimized interpolation kernel and edge orientation for mobile digital zoom system. , 2014, , .		3

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91	Construction of Incoherent Unit Norm Tight Frames With Application to Compressed Sensing. IEEE Transactions on Information Theory, 2014, 60, 2319-2330.	1.5	53
92	Variational Bayesian Methods For Multimedia Problems. IEEE Transactions on Multimedia, 2014, 16, 1000-1017.	5.2	25
93	Automated Recovery of Compressedly Observed Sparse Signals From Smooth Background. IEEE Signal Processing Letters, 2014, 21, 1012-1016.	2.1	3
94	Video completion using block matching for video stabilization. , 2014, , .		2
95	Combining Poisson singular integral and total variation prior models in image restoration. Signal Processing, 2014, 103, 296-308.	2.1	5
96	A novel visualization tool for art history and conservation: Automated colorization of black and white archival photographs of works of art. Studies in Conservation, 2014, 59, 125-135.	0.6	5
97	A multi-camera motion capture system for remote healthcare monitoring. , 2013, , .		9
98	Real-time super-resolution for digital zooming using finite kernel-based edge orientation estimation and truncated image restoration. , 2013, , .		10
99	Binocular video object tracking with fast disparity estimation. , 2013, , .		3
100	Virtual touring: A Content Based Image Retrieval application. , 2013, , .		2
101	Application-Aware Approach to Compression and Transmission of H.264 Encoded Video for Automated and Centralized Transportation Surveillance. IEEE Transactions on Intelligent Transportation Systems, 2013, 14, 2002-2007.	4.7	5
102	Forest hashing: Expediting large scale image retrieval. , 2013, , .		6
103	Iterative image restoration using nonstationary priors. Applied Optics, 2013, 52, D102.	0.9	11
104	Bayesian Simultaneous Sparse Approximation With Smooth Signals. IEEE Transactions on Signal Processing, 2013, 61, 5716-5729.	3.2	10
105	Compressive sensing-based image denoising using adaptive multiple sampling and optimal error tolerance. , 2013, , .		1
106	Video Activity Recognition by Luminance Differential Trajectory and Aligned Projection Distance. Handbook of Statistics, 2013, 31, 300-325.	0.4	0
107	Bayesian Blind Deconvolution with General Sparse Image Priors. Lecture Notes in Computer Science, 2012, , 341-355.	1.0	97
108	Sparse Bayesian Methods for Low-Rank Matrix Estimation. IEEE Transactions on Signal Processing, 2012, 60, 3964-3977.	3.2	278

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109	Single camera-based full depth map estimation using color shifting property of a multiple color-filter aperture. , 2012, , .		8
110	A game theoretic approach to video streaming over peer-to-peer networks. Signal Processing: Image Communication, 2012, 27, 545-554.	1.8	8
111	Astronomical image restoration using variational methods and model combination. Statistical Methodology, 2012, 9, 19-31.	0.5	9
112	Bayesian TV denoising of SAR images. , 2011, , .		2
113	Low-rank matrix completion by variational sparse Bayesian learning. , 2011, , .		10
114	Low-Complexity Tracking-Aware H.264 Video Compression for Transportation Surveillance. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1378-1389.	5.6	21
115	Variational Bayesian Super Resolution. IEEE Transactions on Image Processing, 2011, 20, 984-999.	6.0	212
116	Super Resolution of Multispectral Images using â„“1 Image Models and Interband Correlations. Journal of Signal Processing Systems, 2011, 65, 509-523.	1.4	8
117	Video retrieval using sparse Bayesian reconstruction. , 2011, , .		2
118	A novel iterative image restoration algorithm using nonstationary image priors. , 2011, , .		3
119	Bayesian Compressive Sensing Using Laplace Priors. IEEE Transactions on Image Processing, 2010, 19, 53-63.	6.0	589
120	A game theoretic approach to video streaming over peer-to-peer networks. , 2010, , .		2
121	Fast total variation image restoration with parameter estimation using bayesian inference. , 2010, , .		1
122	Using the Kullback-Leibler divergence to combine image priors in Super-Resolution image reconstruction. , 2010, , .		15
123	Application-Centric Routing for Video Streaming Over MultiHop Wireless Networks. IEEE Transactions on Circuits and Systems for Video Technology, 2010, 20, 1721-1734.	5.6	35
124	Unequal Error Protection for Robust Streaming of Scalable Video Over Packet Lossy Networks. IEEE Transactions on Circuits and Systems for Video Technology, 2010, 20, 407-416.	5.6	75
125	Maximum <i>a Posteriori</i> Video Super-Resolution Using a New Multichannel Image Prior. IEEE Transactions on Image Processing, 2010, 19, 1451-1464.	6.0	122
126	Image prior combination in super-resolution image registration & reconstruction. , 2010, , .		7

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127	Variational Bayesian inference image restoration using a product of total variation-like image priors. , 2010, , .		2
128	Bayesian compressive sensing of wavelet coefficients using multiscale Laplacian priors. , 2009, , .		11
129	An Efficient Video Indexing and Retrieval Algorithm Using the Luminance Field Trajectory Modeling. IEEE Transactions on Circuits and Systems for Video Technology, 2009, 19, 1566-1570.	5.6	7
130	Detecting contextual anomalies of crowd motion in surveillance video. , 2009, , .		28
131	Maximum a posteriori super-resolution of compressed video using a new multichannel image prior. , 2009, , .		5
132	Bayesian Super-Resolution image reconstruction using an ℓ1 prior. , 2009, , .		30
133	Optimized Bit Extraction Using Distortion Modeling in the Scalable Extension of H.264/AVC. IEEE Transactions on Image Processing, 2009, 18, 2022-2029.	6.0	33
134	Local Bayesian image restoration using variational methods and Gamma-Normal distributions. , 2009, , .		3
135	Fast bayesian compressive sensing using Laplace priors. , 2009, , .		16
136	Two-dimensional channel coding for scalable H.264/AVC video. , 2009, , .		0
137	Variational Bayesian Blind Deconvolution Using a Total Variation Prior. IEEE Transactions on Image Processing, 2009, 18, 12-26.	6.0	180
138	A video retrieval algorithm using random projections. , 2009, , .		2
139	L1 prior majorization in Bayesian image restoration. , 2009, , .		4
140	Parameter Estimation in TV Image Restoration Using Variational Distribution Approximation. IEEE Transactions on Image Processing, 2008, 17, 326-339.	6.0	144
141	Joint Source Adaptation and Resource Allocation for Multi-User Wireless Video Streaming. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 582-595.	5.6	96
142	A phone-viseme dynamic Bayesian network for audio-visual automatic speech recognition. , 2008, , .		5
143	Vector quantization with memory and multi-labeling for isolated video-only automatic speech recognition. , 2008, , .		0
144	A Kd-Tree Based Dynamic Indexing Scheme for Video Retrieval and Geometry Matching. , 2008, , .		3

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145	Generalized Gaussian Markov random field image restoration using variational distribution approximation. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	7
146	Total variation super resolution using a variational approach. , 2008, , .		67
147	Feature space video stream consistency estimation for dynamic stream weighting in audio-visual speech recognition. , 2008, , .		6
148	Resource Allocation for Downlink Multiuser Video Transmission Over Wireless Lossy Networks. , 2007, , .		1
149	From Global to Local Bayesian Parameter Estimation in Image Restoration using Variational Distribution Approximations. Proceedings International Conference on Image Processing, 2007, , .	0.0	4
150	Total Variation Image Restoration and Parameter Estimation using Variational Posterior Distribution Approximation. Proceedings International Conference on Image Processing, 2007, , .	0.0	9
151	Abnormal Event Detection from Surveillance Video by Dynamic Hierarchical Clustering. , 2007, , .		53
152	Robust Video Retrieval with Luminance Field Trace Indexing and Geometry Matching. , 2007, , .		0
153	DNA Microarray Image Intensity Extraction using Eigenspots. , 2007, , .		2
154	Content-aware resource allocation and packet scheduling for video transmission over wireless networks. IEEE Journal on Selected Areas in Communications, 2007, 25, 749-759.	9.7	129
155	Review of content-aware resource allocation schemes for video streaming over wireless networks. Wireless Communications and Mobile Computing, 2007, 7, 131-142.	0.8	25
156	SUPER-RESOLUTION OF MULTISPECTRAL IMAGES. , 2007, , .		0
157	Blind Deconvolution Using a Variational Approach to Parameter, Image, and Blur Estimation. IEEE Transactions on Image Processing, 2006, 15, 3715-3727.	6.0	170
158	Audio-Visual Biometrics. Proceedings of the IEEE, 2006, 94, 2025-2044.	16.4	92
159	Joint rate control and scheduling for wireless uplink video streaming. Journal of Zhejiang University: Science A, 2006, 7, 801-810.	1.3	0
160	Parameter Estimation in Bayesian Reconstruction of Multispectral Images using Super Resolution Techniques. , 2006, , .		3
161	Fast Video Shot Retrieval with Luminance Field Trace Indexing and Geometry Matching. , 2006, , .		5
162	Parameter estimation in Bayesian reconstruction of SPECT images: An aid in nuclear medicine diagnosis. International Journal of Imaging Systems and Technology, 2004, 14, 21-27.	2.7	5

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163	Parameter estimation in bayesian high-resolution image reconstruction with multisensors. IEEE Transactions on Image Processing, 2003, 12, 1655-1667.	6.0	72
164	SPECT IMAGE RECONSTRUCTION USING COMPOUND PRIOR MODELS. International Journal of Pattern Recognition and Artificial Intelligence, 2002, 16, 317-330.	0.7	6
165	High-resolution image reconstruction of low-resolution DCT-based compressed images. , 2002, , .		6
166	A rate-distortion optimal coding alternative to matching pursuit. , 2002, , .		4
167	Reconstruction of high-resolution image frames from a sequence of low-resolution and compressed observations. , 2002, , .		3
168	Frame Rate and Viseme Analysis for Multimedia Applications to Assist Speechreading. Journal of Signal Processing Systems, 1998, 20, 7-23.	1.0	9
169	Detection and removal of anomalies in digitized animation film. International Journal of Imaging Systems and Technology, 1998, 9, 283-293.	2.7	0
170	A Hybrid Object-Oriented Very Low Bit Rate Video Codec. Journal of Signal Processing Systems, 1997, 17, 137-161.	1.0	0
171	Spatially adaptive iterative algorithm for the restoration of astronomical images. International Journal of Imaging Systems and Technology, 1995, 6, 305-313.	2.7	24
172	Lossless compression of images using logic minimization. , 0, , .		10