

# Ivan V BajiÄ

## List of Publications by Year in descending order

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161  
papers

3,042  
citations

377584

21  
h-index

286692

43  
g-index

162  
all docs

162  
docs citations

162  
times ranked

2370  
citing authors

#	ARTICLE	IF	CITATIONS
1	Point Cloud Sampling via Graph Balancing and Gershgorin Disc Alignment. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2023, 45, 868-886.	9.7	4
2	Updating a dataset of labelled objects on raw video sequences with unique object IDs. Data in Brief, 2022, 41, 107892.	0.5	1
3	Scalable Image Coding for Humans and Machines. IEEE Transactions on Image Processing, 2022, 31, 2739-2754.	6.0	44
4	Point Cloud Video Super-Resolution via Partial Point Coupling and Graph Smoothness. IEEE Transactions on Image Processing, 2022, 31, 4117-4132.	6.0	2
5	Soft Video Multicasting Using Adaptive Compressed Sensing. IEEE Transactions on Multimedia, 2021, 23, 12-25.	5.2	8
6	Pareto-Optimal Bit Allocation for Collaborative Intelligence. IEEE Transactions on Image Processing, 2021, 30, 3348-3361.	6.0	9
7	A dataset of labelled objects on raw video sequences. Data in Brief, 2021, 34, 106701.	0.5	11
8	Information Flow Through U-Nets. , 2021, , .		3
9	Latent Space Inpainting for Loss-Resilient Collaborative Object Detection. , 2021, , .		3
10	Collaborative Intelligence: Challenges and Opportunities. , 2021, , .		15
11	Latent Space Motion Analysis for Collaborative Intelligence. , 2021, , .		2
12	Swimmer Stroke Rate Estimation from Overhead Race Video. , 2021, , .		4
13	Short-Term Demand Prediction Using an Ensemble of Linearly-Constrained Estimators. IEEE Transactions on Power Systems, 2021, 36, 3163-3175.	4.6	10
14	CALTEC: Content-Adaptive Linear Tensor Completion For Collaborative Intelligence. , 2021, , .		4
15	TraceGAN: Synthesizing Appliance Power Signatures Using Generative Adversarial Networks. IEEE Transactions on Smart Grid, 2021, 12, 4553-4563.	6.2	28
16	Latent-Space Scalability for Multi-Task Collaborative Intelligence. , 2021, , .		11
17	Lightweight Compression of Intermediate Neural Network Features for Collaborative Intelligence. IEEE Open Journal of Circuits and Systems, 2021, 2, 350-362.	1.4	12
18	Affine Transformation-Based Deep Frame Prediction. IEEE Transactions on Image Processing, 2021, 30, 3321-3334.	6.0	10

#	ARTICLE	IF	CITATIONS
19	DFTS2: Deep Feature Transmission Simulation for Collaborative Intelligence. , 2021, , .		0
20	Scalable Privacy in Multi-Task Image Compression. , 2021, , .		3
21	Deep Frame Prediction for Video Coding. IEEE Transactions on Circuits and Systems for Video Technology, 2020, , 1-1.	5.6	33
22	Sampling Of 3d Point Cloud Via Gershgorin Disc Alignment. , 2020, , .		4
23	Residential Power Forecasting Based on Affinity Aggregation Spectral Clustering. IEEE Access, 2020, 8, 99431-99444.	2.6	13
24	Back-And-Forth Prediction for Deep Tensor Compression. , 2020, , .		15
25	Lightweight Compression Of Neural Network Feature Tensors For Collaborative Intelligence. , 2020, , .		28
26	Tensor Completion Methods for Collaborative Intelligence. IEEE Access, 2020, 8, 41162-41174.	2.6	9
27	Point Cloud Denoising via Feature Graph Laplacian Regularization. IEEE Transactions on Image Processing, 2020, 29, 4143-4158.	6.0	59
28	Super-Resolution of 3D Color Point Clouds Via Fast Graph Total Variation. , 2020, , .		11
29	Bit Allocation for Multi-Task Collaborative Intelligence. , 2020, , .		11
30	Stop. , 2020, , .		4
31	A Lightweight Model for Deep Frame Prediction in Video Coding. , 2020, , .		0
32	Performance Evaluation of Techniques for Identifying Abnormal Energy Consumption in Buildings. IEEE Access, 2019, 7, 62721-62733.	2.6	32
33	FDDB-360: Face Detection in 360-Degree Fisheye Images. , 2019, , .		7
34	Datasets for face and object detection in fisheye images. Data in Brief, 2019, 27, 104752.	0.5	14
35	Wavenilm: A Causal Neural Network for Power Disaggregation from the Complex Power Signal. , 2019, , .		75
36	Weighting Quantization Matrices for HEVC/H.265-Coded RGB Videos. IEEE Access, 2019, 7, 36019-36032.	2.6	5

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37	3D Point Cloud Super-Resolution via Graph Total Variation on Surface Normals. , 2019, , .		21
38	Visually Assisted Time-Domain Speech Enhancement. , 2019, , .		9
39	Multi-Task Learning with Compressible Features for Collaborative Intelligence. , 2019, , .		25
40	3D Point Cloud Color Denoising Using Convex Graph-Signal Smoothness Priors. , 2019, , .		13
41	Residential Power Forecasting Using Load Identification and Graph Spectral Clustering. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1900-1904.	2.2	40
42	A Perceptual Distinguishability Predictor For JND-Noise-Contaminated Images. IEEE Transactions on Image Processing, 2019, 28, 2242-2256.	6.0	10
43	Full-Reference Objective Quality Assessment of Tone-Mapped Images. IEEE Transactions on Multimedia, 2018, 20, 392-404.	5.2	37
44	Can you Find a Face in a HEVC Bitstream?. , 2018, , .		9
45	Speech Intelligibility of Microphone Arrays in Reverberant Environments with Interference. , 2018, , .		0
46	High Efficiency Compression for Object Detection. , 2018, , .		27
47	Near-Lossless Deep Feature Compression for Collaborative Intelligence. , 2018, , .		45
48	Local 3D Point Cloud Denoising via Bipartite Graph Approximation & Total Variation. , 2018, , .		17
49	MV-YOLO: Motion Vector-Aided Tracking by Semantic Object Detection. , 2018, , .		18
50	Deep Feature Compression for Collaborative Object Detection. , 2018, , .		83
51	Adaptive Nonrigid Inpainting of Three-Dimensional Point Cloud Geometry. IEEE Signal Processing Letters, 2018, 25, 878-882.	2.1	16
52	Can You Tell a Face from a HEVC Bitstream?. , 2018, , .		5
53	Online MoCap Data Coding With Bit Allocation, Rate Control, and Motion-Adaptive Post-Processing. IEEE Transactions on Multimedia, 2017, 19, 1127-1141.	5.2	3
54	A Simulation Study of a Three-Dimensional Sound Field Reproduction System for Immersive Communication. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 980-995.	4.0	3

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55	Saliency-Guided Just Noticeable Distortion Estimation Using the Normalized Laplacian Pyramid. IEEE Signal Processing Letters, 2017, 24, 1218-1222.	2.1	13
56	Compressed-domain visual saliency models: a comparative study. Multimedia Tools and Applications, 2017, 76, 26297-26328.	2.6	9
57	Load Disaggregation Based on Aided Linear Integer Programming. IEEE Transactions on Circuits and Systems II: Express Briefs, 2017, 64, 792-796.	2.2	76
58	Deep learning for Amazon satellite image analysis. , 2017, , .		10
59	Exemplar-based framework for 3D point cloud hole filling. , 2017, , .		15
60	Automatic image cropping based on bottom-up saliency and top-down semantics. , 2017, , .		2
61	Incorporating time-of-day usage patterns into non-intrusive load monitoring. , 2017, , .		12
62	HEVC intra features for human detection. , 2017, , .		3
63	Corner proposals from HEVC bitstreams. , 2017, , .		2
64	A glimpse of 3D acoustics for immersive communication. , 2016, , .		1
65	A simulation environment for visual-inertial sensor fusion. , 2016, , .		0
66	Robust Domain-Filling Plumb-Line Lens Distortion Correction. , 2016, , .		0
67	No-reference image quality assessment using statistical wavelet-packet features. Pattern Recognition Letters, 2016, 80, 144-149.	2.6	11
68	Human blastocyst segmentation using neural network. , 2016, , .		13
69	Color Gaussian Jet Features For No-Reference Quality Assessment of Multiply-Distorted Images. IEEE Signal Processing Letters, 2016, 23, 1717-1721.	2.1	14
70	A platform for subjective image quality evaluation on mobile devices. , 2016, , .		1
71	Automatic cleavage detection in H.264 sequence of human embryo development. , 2016, , .		1
72	Learning to reproduce a sound field. , 2016, , .		0

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73	Electricity, water, and natural gas consumption of a residential house in Canada from 2012 to 2014. Scientific Data, 2016, 3, 160037.	2.4	157
74	Comparison of Loudspeaker Placement Methods for Sound Field Reproduction. IEEE/ACM Transactions on Audio Speech and Language Processing, 2016, 24, 1364-1379.	4.0	21
75	Exploiting HMM Sparsity to Perform Online Real-Time Nonintrusive Load Monitoring. IEEE Transactions on Smart Grid, 2016, 7, 2575-2585.	6.2	287
76	Visual Attention Retargeting. IEEE MultiMedia, 2016, 23, 82-91.	1.5	14
77	Compressed-domain correlates of human fixations in dynamic scenes. Multimedia Tools and Applications, 2015, 74, 10057-10075.	2.6	18
78	Distributed video coding supporting hierarchical GOP structures with transmitted motion vectors. Eurasip Journal on Image and Video Processing, 2015, 2015, .	1.7	2
79	How many bits does it take for a stimulus to be salient?. , 2015, , .		69
80	Joint optimization of loudspeaker placement and radiation patterns for Sound Field Reproduction. , 2015, , .		8
81	Bidirectional Mesh-Based Frame Rate Up-Conversion. IEEE MultiMedia, 2015, 22, 36-45.	1.5	2
82	Constant Modulus Blind Adaptive Beamforming Based on Unscented Kalman Filtering. IEEE Signal Processing Letters, 2015, 22, 474-478.	2.1	33
83	Comparison of visual saliency models for compressed video. , 2014, , .		6
84	Can Subliminal Flicker Guide Attention in Natural Images?. , 2014, , .		3
85	Compressed-Domain Correlates of Fixations in Video. , 2014, , .		7
86	Hybrid compression of dynamic 3D mesh data. , 2014, , .		0
87	Attention Retargeting by Color Manipulation in Images. , 2014, , .		21
88	Low-saliency prior for disocclusion hole filling in DIBR-synthesized images. , 2014, , .		3
89	Saliency-Aware Video Compression. IEEE Transactions on Image Processing, 2014, 23, 19-33.	6.0	249
90	Image Inpainting With Data-Adaptive Sparsity. , 2014, , .		1

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91	Video Watermarking With Empirical PCA-Based Decoding. IEEE Transactions on Image Processing, 2013, 22, 4825-4840.	6.0	41
92	Inspiring energy conservation through open source metering hardware and embedded real-time load disaggregation. , 2013, , .		11
93	Pixel-Wise Unified Rate-Quantization Model for Multi-Level Rate Control. IEEE Journal on Selected Topics in Signal Processing, 2013, 7, 1112-1123.	7.3	89
94	Still visualization of object motion in compressed video. , 2013, , .		0
95	QP initialization and adaptive MAD prediction for rate control in HEVC-based multi-view video coding. , 2013, , .		3
96	Video Error Concealment Using a Computation-Efficient Low Saliency Prior. IEEE Transactions on Multimedia, 2013, 15, 2099-2113.	5.2	13
97	3D sound field reproduction using diverse loudspeaker patterns. , 2013, , .		7
98	Loudspeaker placement for sound field reproduction by constrained matching pursuit. , 2013, , .		11
99	3-D Motion Estimation for Visual Saliency Modeling. IEEE Signal Processing Letters, 2013, 20, 972-975.	2.1	4
100	Frame rate up-conversion using global and local higher-order motion. , 2013, , .		2
101	Video Object Tracking in the Compressed Domain Using Spatio-Temporal Markov Random Fields. IEEE Transactions on Image Processing, 2013, 22, 300-313.	6.0	65
102	Towards optimal loudspeaker placement for sound field reproduction. , 2013, , .		17
103	MoCap data coding with unrestricted quantization and rate control. , 2013, , .		5
104	Global motion estimation under translation-zoom ambiguity. , 2013, , .		4
105	Interactive 3D video streaming [Guest Editorial]. , 2013, 51, 92-93.		0
106	Novel motion prediction for multi-view video coding using global disparity. , 2013, , .		0
107	QP initialization and interview MAD prediction for rate control in HEVC-based multi-view video coding. , 2013, , .		2
108	AMPds: A public dataset for load disaggregation and eco-feedback research. , 2013, , .		205

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109	3D motion in visual saliency modeling. , 2013, , .		3
110	Guiding visual attention by manipulating orientation in images. , 2013, , .		8
111	Evaluation of several visual saliency models in terms of gaze prediction accuracy on video. , 2012, , .		7
112	HEVC-based adaptive quantization for screen content videos. , 2012, , .		5
113	Saliency-Cognizant Error Concealment in Loss-Corrupted Streaming Video. , 2012, , .		8
114	Eye-Tracking Database for a Set of Standard Video Sequences. IEEE Transactions on Image Processing, 2012, 21, 898-903.	6.0	85
115	Burst-Loss-Resilient Packetization of Video. IEEE Transactions on Image Processing, 2011, 20, 3195-3206.	6.0	4
116	Multiplicative video watermarking with semi-blind maximum likelihood decoding for copyright protection. , 2011, , .		6
117	A Joint Approach to Global Motion Estimation and Motion Segmentation From a Coarsely Sampled Motion Vector Field. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1316-1328.	5.6	36
118	Hybrid low-delay compression of motion capture data. , 2011, , .		7
119	A Testbed and Methodology for Comparing Live Video Frame Rate Control Methods. IEEE Signal Processing Letters, 2011, 18, 31-34.	2.1	1
120	Rate-Distortion Optimized Pixel-Based Motion Vector Concatenation for Reference Picture Selection. IEEE Transactions on Circuits and Systems for Video Technology, 2011, 21, 1139-1151.	5.6	2
121	Moving Region Segmentation From Compressed Video Using Global Motion Estimation and Markov Random Fields. IEEE Transactions on Multimedia, 2011, 13, 421-431.	5.2	39
122	Scalable video coding based on high efficiency video coding (HEVC). , 2011, , .		15
123	Saliency-preserving video compression. , 2011, , .		11
124	Unequal Error Protection of JPEG2000 Images Using Short Block Length Turbo Codes. IEEE Communications Letters, 2011, 15, 659-661.	2.5	19
125	Spatio-temporal super-resolution from compressed video employing global and local motion. , 2011, , .		1
126	Good-looking green images. , 2011, , .		10



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127	Error concealment strategies for Motion Capture data streaming. , 2011, , .		4
128	Predictive video decoding using GME and motion reliability. Proceedings of SPIE, 2011, , .	0.8	0
129	NAL-SIM: An Interactive Simulator for H.264/AVC Video Coding and Transmission. , 2010, , .		5
130	Motion segmentation in compressed video using Markov Random Fields. , 2010, , .		8
131	Pixel-based motion vector concatenation for Reference Picture Selection. , 2010, , .		1
132	Joint Decoding of Unequally Protected JPEG2000 Bitstreams and Reed-Solomon Codes. IEEE Transactions on Image Processing, 2010, 19, 2693-2704.	6.0	5
133	Impact of imperfect channel estimation on the performance of inter-vehicular cooperative networks. , 2010, , .		7
134	Motion Vector Outlier Rejection Cascade for Global Motion Estimation. IEEE Signal Processing Letters, 2010, 17, 197-200.	2.1	32
135	Region-Based Predictive Decoding of Video. IEEE Transactions on Circuits and Systems for Video Technology, 2010, 20, 452-457.	5.6	2
136	Mcl.jit library for scalable live video in Max/Msp/Jitter. , 2010, , .		2
137	Coarse-to-fine moving region segmentation in compressed video. , 2009, , .		11
138	Frame rate up-conversion of compressed video using region segmentation and depth ordering. , 2009, , .		4
139	Compressed-domain moving region segmentation with pixel precision using motion integration. , 2009, , .		4
140	Scalable Video Streaming With Fine-Grain Adaptive Forward Error Correction. IEEE Transactions on Circuits and Systems for Video Technology, 2009, 19, 1302-1314.	5.6	7
141	Error Control for Broadcasting and Multicasting: An Overview. , 2009, , 313-335.		1
142	A Novel Noncausal Whole-Frame Concealment Algorithm for Video Streaming. , 2008, , .		2
143	Joint source-channel decoding of JPEG2000 images with unequal loss protection. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	2
144	A two-stage H.264/AVC encoder for video streaming with fast reference picture selection. , 2008, , .		1

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145	Predictive Decoding for Delay Reduction in Video Communications. , 2007, , .		7
146	The Effects of Channel Correlation on the Performance of Some Multiple Description Schemes. , 2007, , .		4
147	Efficient Cross-Layer Error Control for Wireless Video Multicast. IEEE Transactions on Broadcasting, 2007, 53, 276-285.	2.5	24
148	Error Concealment for Scalable Motion-Compensated Subband/Wavelet Video Coders. IEEE Transactions on Circuits and Systems for Video Technology, 2007, 17, 508-514.	5.6	4
149	Adaptive MAP error concealment for dispersively packetized wavelet-coded images. IEEE Transactions on Image Processing, 2006, 15, 1226-1235.	6.0	21
150	Noncausal Error Control for Video Streaming Over Wireless Packet Networks. IEEE Transactions on Multimedia, 2006, 8, 1263-1273.	5.2	4
151	NXSensor web tool for evaluating DNA for nucleosome exclusion sequences and accessibility to binding factors. Nucleic Acids Research, 2006, 34, W560-W565.	6.5	8
152	Detection-theoretic analysis of MatInspector. IEEE Transactions on Signal Processing, 2006, 54, 2388-2393.	3.2	2
153	Efficient Error Control for Wireless Video Multicast. , 2006, , .		11
154	Overlay multi-hop FEC scheme for video streaming. Signal Processing: Image Communication, 2005, 20, 710-727.	1.8	17
155	Performance analysis of the efficacy of packet-level FEC in improving video transport over networks. , 2005, , .		11
156	Maximum minimal distance partitioning of the $Z/\text{sup } 2/$ lattice. IEEE Transactions on Information Theory, 2003, 49, 981-992.	1.5	16
157	Domain-based multiple description coding of images and video. IEEE Transactions on Image Processing, 2003, 12, 1211-1225.	6.0	76
158	<title>EZBC video streaming with channel coding and error concealment</title>. , 2003, , .		11
159	Domain-based multiple description coding of images and video. , 2002, , .		7
160	Neural Network System for Promoter Recognition. Studies in Fuzziness and Soft Computing, 2000, , 288-305.	0.6	3
161	Non-causal error control for video streaming over wireless packet networks. , 0, , .		3