

# Eduardo B Da Silva

## List of Publications by Year in descending order

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178  
papers

2,932  
citations

394286

19  
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315616

38  
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184  
all docs

184  
docs citations

184  
times ranked

1774  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Survey on Performance Metrics for Object-Detection Algorithms. , 2020, , .		464
2	A Comparative Analysis of Object Detection Metrics with a Companion Open-Source Toolkit. Electronics (Switzerland), 2021, 10, 279.	1.8	296
3	No-Reference Blur Assessment of Digital Pictures Based on Multifeature Classifiers. IEEE Transactions on Image Processing, 2011, 20, 64-75.	6.0	149
4	The Compression of Electric Signal Waveforms for Smart Grids: State of the Art and Future Trends. IEEE Transactions on Smart Grid, 2014, 5, 291-302.	6.2	119
5	Multiscale Image Fusion Using the Undecimated Wavelet Transform With Spectral Factorization and Nonorthogonal Filter Banks. IEEE Transactions on Image Processing, 2013, 22, 1005-1017.	6.0	83
6	A successive approximation vector quantizer for wavelet transform image coding. IEEE Transactions on Image Processing, 1996, 5, 299-310.	6.0	69
7	On the performance of linear phase wavelet transforms in low bit-rate image coding. IEEE Transactions on Image Processing, 1996, 5, 689-704.	6.0	48
8	Improved similarity-based modeling for the classification of rotating-machine failures. Journal of the Franklin Institute, 2018, 355, 1913-1930.	1.9	48
9	Light field HEVC-based image coding using locally linear embedding and self-similarity compensated prediction. , 2016, , .		45
10	Fault detection and classification in oil wells and production/service lines using random forest. Journal of Petroleum Science and Engineering, 2021, 197, 107879.	2.1	44
11	Multidimensional signal compression using multiscale recurrent patterns. Signal Processing, 2002, 82, 1559-1580.	2.1	43
12	A 4D DCT-Based Lenslet Light Field Codec. , 2018, , .		41
13	Uniform distribution of points on a hyper-sphere with applications to vector bit-plane encoding. IET Computer Vision, 2001, 148, 187.	1.3	39
14	Efficient coherent adaptive representations of monitored electric signals in power systems using damped sinusoids. IEEE Transactions on Signal Processing, 2005, 53, 3831-3846.	3.2	36
15	EKG Signal Compression Based on Dc Equalization and Complexity Sorting. IEEE Transactions on Biomedical Engineering, 2008, 55, 1923-1926.	2.5	36
16	A Controlled Filtering Method for Estimating Harmonics of Off-Nominal Frequencies. IEEE Transactions on Smart Grid, 2012, 3, 38-49.	6.2	35
17	On EMG Signal Compression With Recurrent Patterns. IEEE Transactions on Biomedical Engineering, 2008, 55, 1920-1923.	2.5	28
18	Recursive Algorithms for Bias and Gain Nonuniformity Correction in Infrared Videos. IEEE Transactions on Image Processing, 2012, 21, 4758-4769.	6.0	27

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19	On Dictionary Adaptation for Recurrent Pattern Image Coding. IEEE Transactions on Image Processing, 2008, 17, 1640-1653.	6.0	26
20	On the empirical rate-distortion performance of Compressive Sensing. , 2009, , .		26
21	Objective no-reference image blur metric based on local phase coherence. Electronics Letters, 2009, 45, 1162.	0.5	24
22	JPEG Pleno light field coding technologies. , 2019, , .		23
23	Scanned Compound Document Encoding Using Multiscale Recurrent Patterns. IEEE Transactions on Image Processing, 2010, 19, 2712-2724.	6.0	21
24	Intra Predictive Depth Map Coding Using Flexible Block Partitioning. IEEE Transactions on Image Processing, 2015, 24, 4055-4068.	6.0	21
25	Electrocardiographic signal compression using multiscale recurrent patterns. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 2739-2753.	0.1	20
26	A visible-light and infrared video database for performance evaluation of video/image fusion methods. Multidimensional Systems and Signal Processing, 2019, 30, 119-143.	1.7	20
27	Optimum Rate-Distortion Dictionary Selection for Compression of Atomic Decompositions of Electric Disturbance Signals. IEEE Signal Processing Letters, 2007, 14, 81-84.	2.1	19
28	Universal Image Compression Using Multiscale Recurrent Patterns With Adaptive Probability Model. IEEE Transactions on Image Processing, 2008, 17, 512-527.	6.0	19
29	A generic post-deblocking filter for block based image compression algorithms. Signal Processing: Image Communication, 2012, 27, 985-997.	1.8	19
30	Efficient plenoptic imaging representation: Why do we need it?. , 2016, , .		19
31	Digital Image Processing. , 2005, , 891-910.		17
32	A novel iterative calibration approach for thermal infrared cameras. , 2013, , .		17
33	On ECG Signal Compression With 1-D Multiscale Recurrent Patterns Allied to Preprocessing Techniques. IEEE Transactions on Biomedical Engineering, 2009, 56, 896-900.	2.5	16
34	Enhanced demodulation-based technique for estimating the parameters of fundamental component in power systems. IET Generation, Transmission and Distribution, 2011, 5, 979.	1.4	16
35	The JPEG Pleno Light Field Coding Standard 4D-Transform Mode: How to Design an Efficient 4D-Native Codec. IEEE Access, 2020, 8, 170807-170829.	2.6	16
36	Modeling of Electric Disturbance Signals Using Damped Sinusoids via Atomic Decompositions and Its Applications. Eurasip Journal on Advances in Signal Processing, 2007, 2007, .	1.0	15

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37	Improving multiscale recurrent pattern image coding with least-squares prediction mode. , 2009, , .		15
38	Anomaly Detection in Moving-Camera Video Sequences Using Principal Subspace Analysis. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1003-1015.	3.5	15
39	Domain-Transformable Sparse Representation for Anomaly Detection in Moving-Camera Videos. IEEE Transactions on Image Processing, 2020, 29, 1329-1343.	6.0	15
40	Multiscale recurrent patterns applied to stereo image coding. IEEE Transactions on Circuits and Systems for Video Technology, 2005, 15, 1434-1447.	5.6	14
41	Light field imaging coding: Performance assessment methodology and standards benchmarking. , 2016, , .		14
42	Low bit-rate video coding using wavelet vector quantisation. IET Computer Vision, 1995, 142, 141.	1.3	13
43	Convergent algorithms for successive approximation vector quantisation with applications to wavelet image compression. IET Computer Vision, 1999, 146, 159.	1.3	13
44	On the design of maximally incoherent sensing matrices for compressed sensing using orthogonal bases and its extension for biorthogonal bases case. , 2014, 27, 12-22.		13
45	The influence of feature vector on the classification of mechanical faults using neural networks. , 2016, , .		13
46	Anomaly detection with a moving camera using spatio-temporal codebooks. Multidimensional Systems and Signal Processing, 2018, 29, 1025-1054.	1.7	13
47	Wavelet transform image coding using lattice vector quantisation. Electronics Letters, 1994, 30, 1477-1478.	0.5	12
48	Universal image coding using multiscale recurrent patterns and prediction. , 2005, , .		12
49	FIR Filter Design Based on Successive Approximation of Vectors. IEEE Transactions on Signal Processing, 2014, 62, 3833-3848.	3.2	12
50	Performance analysis of JPEG Pleno light field coding. , 2019, , .		12
51	Wavelet-watershed automatic infrared image segmentation method. Electronics Letters, 2003, 39, 903.	0.5	11
52	Intra-prediction for color image coding using YUV correlation. , 2010, , .		11
53	Compressing depth maps using multiscale recurrent pattern image coding. Electronics Letters, 2010, 46, 340.	0.5	11
54	On fault classification in rotating machines using fourier domain features and neural networks. , 2013, , .		11

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55	High-precision frequency estimation of real sinusoids with reduced computational complexity using a model-based matched-spectrum approach. , 2014, 34, 67-73.		11
56	Quality of Experience in a Stereoscopic Multiview Environment. IEEE Transactions on Multimedia, 2018, 20, 1-14.	5.2	11
57	Automatic event identification and extraction from daily drilling reports using an expert system and artificial intelligence. Journal of Petroleum Science and Engineering, 2021, 205, 108939.	2.1	11
58	Multiscale recurrent pattern image coding with a flexible partition scheme. , 2008, , .		10
59	On the statistics of matching pursuit angles. Signal Processing, 2010, 90, 3164-3184.	2.1	10
60	An annotated video database for abandoned-object detection in a cluttered environment. , 2014, , .		10
61	Anomaly detection with a moving camera using multiscale video analysis. Multidimensional Systems and Signal Processing, 2019, 30, 311-342.	1.7	10
62	A fault detector/classifier for closed-ring power generators using machine learning. Reliability Engineering and System Safety, 2021, 212, 107614.	5.1	10
63	Weak Classifier for Density Estimation in Eye Localization and Tracking. IEEE Transactions on Image Processing, 2017, 26, 3410-3424.	6.0	9
64	Plenoptic imaging: Representation and processing. , 2018, , 75-111.		9
65	Wavelet vector quantisation scheme for image sequence coding at 64 kbit/s. Electronics Letters, 1995, 31, 92-93.	0.5	8
66	Successive Approximation Wavelet Coding of AVIRIS Hyperspectral Images. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 370-385.	7.3	8
67	Infrared-visible image fusion using the undecimated wavelet transform with spectral factorization and target extraction. , 2012, , .		8
68	Audio anomaly detection on rotating machinery using image signal processing. , 2016, , .		8
69	Automatic detection of Aedes aegypti breeding grounds based on deep networks with spatio-temporal consistency. Computers, Environment and Urban Systems, 2022, 93, 101754.	3.3	8
70	Super high definition image coding using wavelet vector quantization. IEEE Transactions on Circuits and Systems for Video Technology, 1996, 6, 399-406.	5.6	7
71	Segmentation approach using local image statistics. Electronics Letters, 2000, 36, 1199.	0.5	7
72	Efficient dictionary design for multiscale recurrent pattern image coding. , 0, , .		7

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73	Adaptive least squares prediction for stereo image coding. , 2011, , .		7
74	How far can one compress digital fault records? Analysis of a matching pursuit-based algorithm. , 2012, 22, 288-297.		7
75	Abandoned object detection using operator-space pursuit. , 2015, , .		7
76	On the detection of abandoned objects with a moving camera using robust subspace recovery and sparse representation. , 2015, , .		7
77	A Study on the 4D Sparsity of JPEG Pleno Light Fields Using the Discrete Cosine Transform. , 2018, , .		7
78	Variational Methods for Machine Learning with Applications to Deep Networks. , 2021, , .		7
79	Multiscale recurrent pattern matching approach for depth map coding. , 2010, , .		6
80	Efficient depth map coding using linear residue approximation and a flexible prediction framework. , 2012, , .		6
81	Turning Laminaria digitata seaweed into a resource for sustainable and ecological removal of trivalent chromium ions from aqueous solutions. Clean Technologies and Environmental Policy, 2013, 15, 955-965.	2.1	6
82	Sparse least-squares prediction for intra image coding. , 2015, , .		6
83	Image Coding Using Generalized Predictors Based on Sparsity and Geometric Transformations. IEEE Transactions on Image Processing, 2016, 25, 4046-4060.	6.0	6
84	Application of Machine Learning to Evaluate Unbalance Severity in Rotating Machines. Mechanisms and Machine Science, 2019, , 144-160.	0.3	6
85	Design of wavelets for image compression satisfying perceptual criteria. Electronics Letters, 1997, 33, 40.	0.5	5
86	Generalized bit-planes for embedded codes. , 0, , .		5
87	ECG data compression using wavelets. , 0, , .		5
88	Rate distortion optimized adaptive multiscale vector quantization. , 0, , .		5
89	Two-dimensional discriminative filters for image template detection. , 0, , .		5
90	Multidimensional signal compression using multi-scale recurrent patterns with smooth side-match criterion. , 0, , .		5

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91	Improving H.264/AVC Inter Compression with Multiscale Recurrent Patterns. , 2006, , .		5
92	Facial fiducial points detection using discriminative filtering on principal components. , 2010, , .		5
93	Recurrent pattern matching based stereo image coding using linear predictors. Multidimensional Systems and Signal Processing, 2017, 28, 1393-1416.	1.7	5
94	On the coding gain of wavelet transforms. , 0, , .		4
95	A universal multi-dimensional lossy compression algorithm. , 0, , .		4
96	Coherent decompositions of power systems signals using damped sinusoids with applications to denoising. , 0, , .		4
97	Closed-form solutions for discriminative filtering using impulse restoration techniques. Electronics Letters, 2002, 38, 1332.	0.5	4
98	Compression of Hyperspectral Images with LVQ-SPECK. , 2008, , .		4
99	Stereo image coding using dynamic template-matching prediction. , 2011, , .		4
100	Efficient Recurrent Pattern Matching Video Coding. IEEE Transactions on Circuits and Systems for Video Technology, 2012, 22, 1161-1173.	5.6	4
101	Predictive depth map coding for efficient virtual view synthesis. , 2013, , .		4
102	Single image super-resolution using sparse representations with structure constraints. , 2014, , .		4
103	A geometric space-view redundancy descriptor for light fields: Predicting the compression potential of the JPEG Pleno light field datasets. , 2017, , .		4
104	Rate-Distortion Performance and Incremental Transmission Scheme of Compressive Sensed Measurements in Wireless Sensor Networks. Sensors, 2019, 19, 266.	2.1	4
105	Multimodal soccer highlight identification using a sparse subset of frames integrating long-term sliding windows. Information Sciences, 2021, 578, 702-724.	4.0	4
106	H.264/AVC Based Video Coding Using Multiscale Recurrent Patterns: First Results. Lecture Notes in Computer Science, 2006, , 107-114.	1.0	4
107	Image coding using successive approximation wavelet vector quantization. , 0, , .		3
108	A family of wavelets for image compression satisfying perceptual criteria. , 0, , .		3

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109	Universal multi-scale matching pursuits algorithm with reduced blocking effect. , 0, , .		3
110	Matching pursuits video coding using generalized bit-planes. , 0, , .		3
111	Stereo image coding using multiscale recurrent patterns. , 0, , .		3
112	Alpha-expansions: a class of frame decompositions. Applied and Computational Harmonic Analysis, 2002, 13, 103-115.	1.1	3
113	Multiple template detection using impulse restoration and discriminative filters. Electronics Letters, 2003, 39, 1172.	0.5	3
114	3D weather radar image compression using multiscale recurrent patterns. , 2008, , .		3
115	Joint bias and gain nonuniformity correction of infrared videos using tensorial-RLS technique. , 2009, , .		3
116	Compression of touchless multiview fingerprints. , 2011, , .		3
117	Lossy and lossless image encoding using multi-scale recurrent pattern matching. IET Image Processing, 2013, 7, 556-566.	1.4	3
118	Detection of abandoned objects using robust subspace recovery with intrinsic video alignment. , 2017, , .		3
119	Moving-Camera Video Surveillance in Cluttered Environments Using Deep Features. , 2018, , .		3
120	Results on successive approximation vector quantisation. Electronics Letters, 1998, 34, 59.	0.5	2
121	Rate control strategy for embedded wavelet video coders. Electronics Letters, 1999, 35, 1815.	0.5	2
122	Video coding using greedy decompositions on generalised bit-planes. Electronics Letters, 2002, 38, 507.	0.5	2
123	Successive approximation quantization for image compression. IEEE Circuits and Systems Magazine, 2002, 2, 20-45.	2.6	2
124	Waveform speech coding using multiscale recurrent patterns. , 2010, , .		2
125	An objective 3D quality assessment model to adjust stereo camera baseline. , 2015, , .		2
126	Online video-based sequence synchronization for moving camera object detection. , 2017, , .		2



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127	Improving Multiscale Recurrent Pattern Image Coding with Deblocking Filtering. Communications in Computer and Information Science, 2008, , 224-236.	0.4	2
128	A DCT-based aliasing cancellation method in subband coding. IEEE Transactions on Circuits and Systems for Video Technology, 1993, 3, 384-387.	5.6	1
129	A Hybrid Subband-DCT Codec for Transmission of High Resolution Still Pictures at 64K bit/s. Journal of Visual Communication and Image Representation, 1995, 6, 164-177.	1.7	1
130	A rate control strategy for embedded wavelet video coders in an MPEG-4 framework. , 0, , .		1
131	Design of nonlinear multi-resolution decomposition schemes using morphological operations. Electronics Letters, 2000, 36, 843.	0.5	1
132	Design of non-linear multi-resolution decompositions with applications to image compression. , 0, , .		1
133	A bit allocation scheme for a class of embedded wavelet video encoders. Journal of Visual Communication and Image Representation, 2003, 14, 136-149.	1.7	1
134	Improved dictionaries for generalized bitplanes-based matching pursuits video coding using ridgelets. , 0, , .		1
135	Comparative analysis of bitplane-based wavelet image coders. IET Computer Vision, 2004, 151, 109.	1.3	1
136	Improving multiscale recurrent pattern image coding with enhanced dictionary updating strategies. , 2006, , .		1
137	Hyperspectral image coding with LVQ-SPECK. , 2008, , .		1
138	A face-based authentication system using correlation filters on videos. , 2009, , .		1
139	Computational complexity reduction methods for multiscale recurrent pattern algorithms. , 2011, , .		1
140	Impact of encoding configurations on the perceived quality of high definition videoconference sequences. , 2012, , .		1
141	Quality perception in 3D interactive environments. , 2013, , .		1
142	Video compression using 3D multiscale recurrent patterns. , 2013, , .		1
143	Feature-based video coding: Designing an RD efficient and search friendly framework. , 2016, , .		1
144	A morphological approach to the automatic detection of dark fringes applied to birefringence images. , 2016, , .		1

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145	Assessment of radiation dose received by nuclear plant personnel through a video-based surveillance system. <i>Progress in Nuclear Energy</i> , 2018, 103, 51-59.	1.3	1
146	Prediction Techniques for Image and Video Coding. , 2017, , 7-33.		1
147	Image coding by the mesh block transform. , 0, , .		0
148	Compression of super high definition images using successive approximation wavelet lattice quantisation. , 1995, , .		0
149	Interframe image sequence coding using overlapped motion estimation and wavelet lattice quantisation. , 1995, , .		0
150	Super high definition image coding using successive approximation wavelet vector quantization. , 0, , .		0
151	Wavelet lattice quantization for low bit rate video coding. , 0, , .		0
152	Design of high performance wavelets for image coding. , 0, , .		0
153	Design of wavelets with optimal correction of ringing effect. <i>Electronics Letters</i> , 1998, 34, 447.	0.5	0
154	Successive approximation vector quantization with improved convergence. , 0, , .		0
155	Minimizing ringing effect on images coded at low bit rates with wavelets. , 0, , .		0
156	Successive approximation trellis-coded vector quantization for embedded coders. , 0, , .		0
157	Non-separable non-linear decompositions with applications to image compression. , 2000, , .		0
158	Codebooks for vector bit-plane encoding. <i>Electronics Letters</i> , 2000, 36, 1038.	0.5	0
159	Source-channel coding of still images using lapped transforms and block classification. <i>Electronics Letters</i> , 2002, 38, 1087.	0.5	0
160	Robust still image coding using lapped transforms with block classification. , 0, , .		0
161	Robust remote sensing still image coding with low memory requirements. , 0, , .		0
162	Design of High-Performance Wavelets for Image Coding Using a Perceptual Time Domain Criterion. <i>Circuits, Systems, and Signal Processing</i> , 2002, 21, 225-242.	1.2	0

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163	Reduced cross-discrimination for discriminative filters. , 0, , .		0
164	On the Time-Frequency Content of Weyl-Heisenberg Frames Generated from Odd and Even Functions. , 0, , .		0
165	An efficient Lloyd-Max quantizer for Matching Pursuit decompositions. , 2006, , .		0
166	Compression of atomic decompositions using R-D optimum dictionary selection. , 2006, , .		0
167	Successive approximation FIR filter design. , 2011, , .		0
168	Guest Editorial Special Issue on ISCAS 2011. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 905-905.	3.5	0
169	Special issue on "Challenges, trends and solutions for 3-D imaging techniques" Multidimensional Systems and Signal Processing, 2013, 24, 219-220.	1.7	0
170	Enhanced motion cues for automatic depth extraction for 2D-to-3D video conversion. , 2014, , .		0
171	Frames in Signal Processing. Academic Press Library in Signal Processing, 2014, 1, 561-590.	0.8	0
172	Image coding using Variable-Size Transforms and a full binary tree recursive optimization. , 2014, , .		0
173	Fusion of Infrared and Visible-Light Videos Using Motion-Compensated Temporal Sub-Band Decompositions. , 2018, , .		0
174	Toward Visualization and Searching: A Dual-Purpose Video Coding Framework. IEEE Access, 2020, 8, 14860-14874.	2.6	0
175	A morphological approach to the automatic detection of dark fringes of birefringence images obtained in a multipass rheometer. Rheologica Acta, 2020, 59, 177-200.	1.1	0
176	Compression of Depth Maps Using Predictive Coding. , 2017, , 65-95.		0
177	Image and Video Coding Standards. , 2017, , 35-64.		0
178	Design of Seasonal Adjustment Filter Robust to Variations in the Seasonal Behaviour of Time Series. Journal of Official Statistics, 2017, 33, 155-186.	0.1	0